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EDITED BY

DAVID W. YANDELL, M.D.
Professor of the Science and Art of Surgery and Clinical Surgery, University of Louisville.

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THEOPHILUS PARVIN, M.D., LL.D.
Professor of Obstetrics and Medical and Surgical Diseases of Women, University of Louisville.

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LIST OF CONTRIBUTORS.

WM. H. BELL, M.D.

G. W. H. KEMPER, M.D.

J. R. WEIST, M.D.

MOSES GUNN, M.D.

J. W. HOLLAND, M.D.

W. CHEATHAM, M.D.

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R. MAUPIN FERGUSON, M.D.

FAYETTE DUNLAP, M.D.

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Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Communications.

THE MANAGEMENT OF STILLBORN CHILDREN AFTER RESUSCITATION.*

BY WM. H. BELL, M.D.

The occurrence of a stillbirth in obstetric practice is an event which happens in the experience of every accoucheur more or less often. And all of us whose work in this field runs back a number of years can remember cases of this nature which have occurred sometimes with most astonishing frequency and on occasions where least anticipated. No degree of obstetric efficiency will always avert it. It is liable to happen in the practice of the skilled and wary as well as in that of the uneducated and careless.

No description of a stillborn child is necessary at this time. Memory can recall for us the limp, livid newborn in our hands relaxed and lifeless. If we had not applied the ear over the heart we might have readily believed that the little stranger had died before it had been born, for there is the fallen jaw, the lack-luster eye, the pulseless wrist, and the cold, clammy skin; yet

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the ear detects a faint, muffled, weary cardiac pulsation, and with this note of encouragement, instead of abandoning the infant to its fate, the attendant hastens to the work of resuscitation, and sometimes battles with death for an hour or more, until, when finally the first faint gasp informs him that his labor is about to be rewarded with success, that the vital energies are rallying to the aid of the little one, and that at least for the present a life has been rescued from death. Proud moment this for the hard-worked accoucheur. Doubly proud would he be could he feel certain that no untoward change might yet happen to snatch from him the results of his hard work. Unfortunately, however, experience tells him that this frequently happens; that the child may live on for a few days and then die, and that without any well-devised effort having been made to save it. In this paper, therefore, I shall ask your attention to the management of the child after resuscitation has been completed, and when death is again about to threaten it, through the effects of the apnea that produced the stillbirth in the first place.

I think I may safely make the statement that out of ten infants resuscitated after having been stillborn, where the work of resuscitation has lasted three fourths of an hour or over, at least six of them will die within two or three days unless relieved by prompt measures. And further, that in all these cases death is ultimately brought about through the effects of the asphyxia the child has endured; or in other words, that just in proportion to the time that the child has been deprived of the means of oxygenating its blood, will be the danger of death.

Of the different methods resorted to for resuscitating stillborn children, in my own experience the following is preferable: After having removed as far as possible all mucus from the child's throat, resort to the mouth-to-mouth process, closing the nose, and applying the hand gently over the infant's stomach so as to keep the air as far as can be from entering it while it is being forced into the lungs; this should be repeated twice every minute, and is the simplest and most effective of all the methods for inducing the respiratory desire, and at the same time for

artificially supplying air to the lungs until this desire for the act of breathing is established.

It is necessary to exercise great care in regulating the force of the inflated air, lest the delicate walls of the air-cells be ruptured and incalculable mischief done. I now recall an instance where I had reason to believe too great force had been employed in inflating the lungs of a child but moderately asphyxiated, and in whom on the second day great embarrassment in breathing occurred, and where finally bloody froth issued in large quantities from nose and mouth, denoting pulmonary edema, which shortly put an end to the child. The steady, gentle pressure of air, while it expands the lungs will likewise induce a disposition to breathe on the part of the child—a fact in favor of the mouth-to-mouth process. The warm bath or hot flannels applied to the surface of the body are also potent auxiliaries.

Illustrative of the above remarks, I will narrate as concisely as possible six cases of stillbirth where, after the act of resuscitation was accomplished, no further steps were used, and where the children died within two or three days, presenting a class of symptoms that were tolerably uniform and easily recognized.

Case I. S. C. fell in labor May 5, 1870. The labor was unnatural. The right hand, a foot, and the funis all were presenting. The cord was pulsating feebly. The foot was brought down and a stillborn child delivered which breathed for the first time about half an hour after it was delivered, and shortly afterward was fully resuscitated and seemed as comfortable as newborn children usually are. Ten hours after birth it became restless, moaned as if in pain, did not sleep or take the breast, and next day began moving one hand more than the other. The moaning gradually became more pronounced, and on the second day it died in a convulsion.

Case II. H. I. had a speedy labor, vertex presentation, but the child was born deeply cyanosed and did not breathe. The funis would not bleed when cut, the pulsation of the heart was barely audible, and breathing very slow. It took fully an hour to establish respiration, which for a long time was weak and feeble.

The child at no time could be induced to sleep. Its cry was at times sharp, sinking into a low moan. The pupil of one eye had a peculiar oscillatory motion as if quivering in jelly. Its respiration became irregular, at times fast and then stopping for a short period. The last mentioned symptoms developed themselves on the second day, toward the end of which the child became convulsed and died. Partial paralysis of the right hand and foot were noticed before death.

CASE III. M. S., primipara. Foot presentation with a loop of the cord. The cervix being fully dilated both feet were brought down. Circulation ceased in the cord about the time that the head became engaged in the pelvis, and there was a delay of probably fifteen minutes in extricating it. The child was profoundly asphyxiated, and was made to respire for the first time at the end of forty minutes. It revived very slowly and was extremely weak. At the end of five or six hours it was dressed and seemed to rest well. We all had strong hopes that danger was now passed. On awaking it attempted to nurse, and vomited. Next day it became restless. A sanguineous discharge came from nose and mouth. Respiration was more labored and painful. The action of the heart assumed an irregular character, being at times intermittent and feeble. As this increased, attacks resembling syncope arose, the infant sinking away as if dead, but reviving again, and it died on the third day, in one of these sinking spells.

CASE IV. M. M., multipara. Arrest of the head in the pelvis for twenty hours. Applied forceps and delivered child stillborn, but was brought to in about half an hour, and then rested well, though it was easily disturbed and fretted at times. On the second day the child acquired a tendency to bow backward, and in the evening it became convulsed and died.

CASE V. Occurred in the practice of Dr. B. C. Stevens, of Logansport, one of our most skillful practitioners. Primipara. Confined of twins, the first a foot presentation, and the second a vertex; an interval of half an hour between their births; both stillborn. The first was resuscitated in twenty minutes, the sec-

ond in half an hour; both were well nourished at birth. I left them comfortable, but next morning found that the oldest breathed in a sort of grunting way as if in pain. Next day found that this child had died in a fit. The other infant now had the same grunting style of breathing. There was no other symptom except an occasional attack of pain, thought to be colic by the women, and treated with warm teas. This infant died in a spasm on the fourth day while trying to nurse.

Case VI. Contributed through the kindness of my friend Dr. Powell. "Multipara. Labor natural and brief, lasting but four hours. The child through some obscure cause was stillborn. Was resuscitated in about fifteen minutes; but always seemed dull and stupid, and died in thirty-six hours. It never could be induced to sleep, and was restless and fussy. It was described as having a muscular tremor before death. There was a history of syphilis in the family, but the child was well developed."

A case entitled "Stillbirth; Resuscitation after two hours and five minutes," was reported to the American Medical Association, in 1880, by Dr. Robert Battey, of Georgia. It was reported as an instance of difficult resuscitation and also one that should teach "a lesson of patience and long perseverance in the use of means of resuscitation in the stillborn." The child received no treatment after its birth, and the case was not reported with that object in view. Breech presentation; labor tedious and difficult. "The child was still and deeply cyanosed, cord was pulseless, the heart-beat was very feeble and irregular. There was no effort at respiration. By the old mouth-to-mouth method the lungs were inflated without loss of time. Cold water was repeatedly dashed in the face and upon the chest, but not the slightest respiratory movement could be elicited. The surface of the body was now becoming quite cool and livid; there was no respiratory impulse whatever, and the heart-beat had not been perceptible for some minutes. The body and limbs of the child were surrounded with hot flannels, and complete and rhythmical inflation of the lungs made mouth-to-mouth. In ten minutes

the pulsations of the heart could be feebly discerned, but they were extremely slow, not more than ten or twelve to the minute, the pulsations, however, increased gradually in frequency and force, until after the lapse of an hour a fair normal standard of circulation was reached. The aeration of the blood had progressed so favorably that the face and head were assuming comparatively a natural, florid color, though the ears, lips, and limbs were still quite livid. Now for the first time a single deep breath was drawn, and in ten minutes more another. The inflation by the mouth was diligently continued, the mucus rattling loudly in the air-passages all the while, portions of it being forced up into the nasal passages by the inflation, and expelled from time to time from the nose during artificial expiration. The intervals between the natural breaths gradually shortened, until the respiration becoming two per minute, the inflation by the mouth was discontinued, and after the lapse of two hours and five minutes the breathing became regular and rhythmical. In fifteen minutes more the aeration of the blood was complete, the lividity was all gone, and the surface presented only the intense redness produced by the diligent application of heated flannels. The cord was now ligatured and divided. The child was well anointed with lard and wrapped in warm flannels and allowed to rest. It moaned at intervals as if in distress, but the action of the heart and lungs was normal. It nursed the mother repeatedly, took catnip tea, and slept fairly well. At midnight, however, the respiration became embarrassed with bronchial mucus, which accumulated more and more, and finally a pink sanguinolent froth issued from the mouth and nostrils. The child died of asphyxia ten hours from its birth."

These cases of stillbirth ending fatally after resuscitation will, I am satisfied, be supplemented by many others in the minds of my audience and establish the comparative frequency of the condition named. One can not but be impressed with the extreme length of time wherein a child during birth may continue to exist after all means of conveying oxygen to its blood have been cut off. Nature has certainly made this provision of

tenacity of life a prerequisite to the period of birth. Ignorance of this fact would readily lead the accoucheur in instances of prolonged asphyxia to despair of saving the child, and without proper effort leave it to its fate.

The fact of frequent death occurring in resuscitated children admonishes us that we are not to consider our task ended as soon as the resuscitation has been accomplished. Experience teaches that then it only really begins, and he will be most successful who, heeding this truth, puts it to practical application. Why is it that the infant, who thus as it were has been snatched from death to life, does not continue to flourish? The answer may be found in studying the effects of asphyxia upon the blood and nervous system, for these effects are well marked and readily discerned.

Attention to the subject will show how the blood plasma as well as the corpuscles are influenced by the accumulation of carbonic acid in the circulating fluid; and how, secondly, the functions of assimilation in the minute parenchyma of the tissues are affected, as well as how readily extravasation of both corpuscles and lymph is brought about, and thus whole regions invaded by foreign products; how the various cavities of the body with their contents may become the seat of extensive congestion, and after a time of inflammatory effusion. These facts being accepted, how easy it is to associate them with the accidents of stillbirth. And that there might be no possible doubt in this matter, Dr. Elliott has certified to us beyond peradventure, through the evidence derivable from post-mortem examination, that the above statements are true, and that lesion, traumatic or otherwise, is always to be found in those children dying from stillbirth. I will briefly quote from his "Obstetric Clinic" portions of several of his cases illustrating this point:

Case I. "Transverse position of head, cord around the neck, stillborn child. Autopsy: sub-pleural and sub-pericardial ecchymoses were found, lungs not expanded, liver and kidneys congested, a few small ecchymoses on the thymus-gland, brain normal." It will be observed that in this case while the lungs,

liver, and kidneys were the seat of damage, the brain escaped injury entirely.

CASE II. "Prolapse of the funis, death of the child. Autopsy: the peritoneum was about half filled with a sero-sanguinolent fluid containing no lymph or pus, both pleuræ and the pericardium were from one third to one half filled with a similar fluid. No effusion between the cranium and dura mater. The vessels of the convex surface of the hemispheres were remarkably congested, and a thin sheet of currant-jelly-like blood extended posteriorly over the convex surface of each hemisphere, the same extravasation had occurred at the base, over the lower part of each posterior lobe." Thus we see in the case of this stillborn infant the brain suffered as well as the contents of the chest and abdomen.

CASE III. "Feet and funis presentation, stillborn child. Autopsy: peritoneal, pleural, and pericardial surfaces healthy, lungs in fetal condition, free from disease. On carefully removing the skull-cap without cutting the brain, one ounce of dark blood serum escaped. The brain was firm and came out intact. There was serous effusion to an abnormal extent in both ventricles, especially the left."

CASE IV. "Compression of cord the cause of fetal death in a cephalic presentation. The autopsy displayed effusion of a clear serous fluid into the abdominal cavity, central blood-vessels very much congested, although the thorax was first opened and the viscera removed. No cerebral extravasation nor other evidence of disease to be found."

I might add a number of cases to this list of autopsies, but nothing would be gained. The autopsies, conducted by an accurate, scientific, and painstaking man, afford to my mind abundant evidence that the bodies of stillborn children, partly through the violence of labor and partly through carbonization of the blood, are subject to lesions sometimes grave enough to destroy life at birth; and if not then, within thirty-six or forty-eight hours, unless death be arrested by prompt therapeutic measures energetically handled. There can to my mind be no other view

taken of this most important subject. No other reason can be advanced to explain the very frequent death of resuscitated children; and who of us has not had instances where death as described has occurred and where no effort has been made to ascertain the cause, much less to check the progress of the threatened dissolution? This field of study is replete with interest, and it is a new one; for as far as my own knowledge goes no medical writer, after directing how best to restore suspended animation, dwells upon the subsequent dangers to be met with or gives the least hint how these dangers may be averted. That idea of the laity, that the newborn are unsuitable subjects for medication, seems contagious, and thus because so young the child is left untreated.

In order to illustrate the subject of treatment, I will describe briefly several cases of stillbirth that I have resuscitated, and in whom a subsequent tendency to death was averted by the timely application of therapeutic measures.

Case I. E. G., primipara, confined August, 1876. Cephalic presentation. Second stage of labor six hours in duration. Without apparent reason the child was born asphyxiated, and was only revived after an hour's diligent work. The respiration was for a long time short and jerky but gradually became steady. The child made an attempt at nursing, and slept a little but shortly awoke restless and in apparent pain, which seemed to be located in the head. Any sharp sound would cause it to start and cry; light was painful and the pupils were contracted. It moaned continually, refused the breast, and finally began to bow backward and to work one hand more than the other. I administered two grains of calomel as a physic, applied hot flannels to the feet and legs, a cool, wet cloth to the head, and gave one and a half grains of bromide of potassium diluted in warm water every half hour. A little later two drops of tincture of hyoscyamus were added to each dose of the bromide. In three hours the child was easier; ordered a hot bath, and substituted one half grain of chloral hydrate for tincture hyoscyamus. The child had a favorable night, had taken several naps, some of them

fully two hours in length, had nursed early in the morning, and had purged. The muscular movements in the arm and opisthotonos had almost disappeared. The chloral hydrate was now dropped and one grain of bromide of potash given every three hours, but as restlessness returned it was given for a while every hour, when the child again improved, nursed, slept, and by the end of the third day had lost all its unfavorable symptoms.

Remarks. I am inclined to think that in this case there was more or less cerebral effusion, probably in the meninges; that shortly after birth a state of acute congestion came on at the seat of effusion, which was arrested; that the sleep the child obtained enabled the enormous recuperative powers that always exist early in life to restore the parts that were damaged, and thus the life of the newborn was saved.

Case II. M. M., multipara, confined December 20, 1876. Foot presentation. The body and the upper extremities were quickly born, but delivery of the head became arrested, and while it was in this position the child struggled violently in its efforts to breathe; but it became limp and relaxed several minutes before the head was released. I thought it was dead, but auscultation discovered the faintest pulsation of the heart. Under the mouth-to-mouth process this pulsation grew perceptibly stronger and the child breathed at the end of forty minutes. I saw it early next morning after its birth, and was told that it had not slept, and had been moaning through the night. Its pupils were dilated. Ordered a hot bath, a cool, wet cloth to the head, a calomel cathartic, and every half hour until relieved one grain and a half of bromide of potassium in warm water; added one half grain of chloral hydrate. At noon no apparent improvement, no sleep, and moan unabated. I now noticed that the abdomen was somewhat swollen and darker in color than the rest of the body. During the act of inspiration the chest-walls did not seem to expand sufficiently, but the whole stomach appeared to swell out in a great roll. Auscultation over the abdomen disclosed increased peristaltic action. Thinking that the trouble was in the bowels and not in the head,

I ordered a hot flaxseed poultice, covered with oiled silk, over the abdomen; to be renewed when cool. The cathartic having acted, I gave one drop of tincture of opium and repeated it in one hour, when the child slept for two hours. One fourth of a drop then given every two hours secured quiet. Next morning it awoke improved, and nursed; moved the bowels by an enema; dropped every alternate dose of the opium; continued the poultice one day more with an occasional hot bath. The child continued to improve, and is today a fine, healthy boy.

Remarks. This case would seem to show that the injury does not always fall upon the same locality. In the first case it was evidently within the cranium, but here it was apparently within the abdomen, involving the muscular coat of the intestines, possibly, and even extending to the peritoneal covering. Both cases seem strictly in accordance with the post-mortem observations of Dr. Elliott already quoted. Case II likewise demonstrates the applicability of opium; for its efficacy was here exerted in a threefold manner—it gave the much-desired sleep, without which the infant could not live long; it allayed pain and its exhausting influences; and finally it arrested undue peristalic action, and thus gave nature time to mend the injury there, contributing in no small degree to this end by its peculiar influence on trophic enervation.

Case III. Primipara; confined May, 1877. Cephalic presentation. Labor lingering and very severe; exhaustion of mother; forceps; child stillborn, but resuscitated in thirty-five minutes; moaned constantly; eyes turned up; pupils contracted; constant vigil. Eight hours after birth applied cool cloth to head and gave a calomel cathartic every half hour, and one grain potassium bromide and a half grain chloral hydrate in warm water. In four hours child slept; awoke easier, but still at times uttered a shrill cry. Increased bromide by half a grain. Child again slept; awoke easier; nursed; gave mixture every two hours; and on the third day child seemed well.

Case IV. Primipara. Breech presentation. Labor had progressed satisfactorily until the breech had commenced to distend

the perineum, when the mother without warning took a convulsion. Sixty grains of chloral in solution were speedily injected into the rectum, a dram of Squibb's fluid extract of ergot given by the mouth, and as the pains had ceased and a return of the convulsion seemed imminent, a finger was hooked into the angle between the thigh and pelvis, and the breech slowly and carefully brought into the world. The lower and then the upper extremities were disengaged, the child during this time making several efforts to breathe. It was stillborn and was resuscitated in about twenty-five minutes. It had drawn considerable fluid into its lungs in its efforts to breathe, and was placed in a position so that this fluid might flow out. It was very feeble for a long time and was not rallied by the warm bath, and the brom. potass. and chloral mixture did not relieve the constant jerky moans; so, the next morning, as there was considerable bloody mucus coming from the child's mouth and nose, tr. of opium was given and the bromide mixture suspended; the chest was enveloped in a hot flaxseed poultice; and sleep and rest were produced by the opiate, one drop being given the first time and half-drop doses subsequently. The discharge from the mouth and nose ceased on the second day, the child taking nourishment, and finally doing well.

I might, did time allow, add to this list three other cases, in all of which untoward symptoms arose after resuscitation, but where treatment brought about a change for the better.

In conclusion, I will merely add a few remarks in a general way on treatment. You have observed that in each instance where the lesion appeared to be within the cranium, brom. potass. and tr. of hyoscyamus or chloral hydrate were administered, with the double object of securing sleep and diminishing vascular tension at the seat of injury, thus at once favoring absorption of effused products and securing rest and recuperation of nervous energy. It is probable that the loss of sleep in fatal cases is a prominent factor in producing death. I think it may occasionally happen that tr. opium, even in the head cases, might answer a better purpose than the bromide, espe-

cially when anemia existed in some other part of the brain, its hypnotic and stimulant action in proper doses giving a more prompt relief. As there is always some uncertainty as to the precise quantity of opium a child can safely bear, I may remark that I have observed that when the brom. potass. was not sufficient to give relief, then opium was always followed by good results, and there seems to be but little doubt that this agent renders opium tolerable in constitutions that do not bear its action kindly. The tr. of hyoscyamus will accomplish this result in a weaker and more uncertain way. It must be borne in mind that sleep, and that early, is indispensable, and that a state of vigil is always evidence that disease in some locality is going from bad to worse. The early and frequent use of the warm bath is a most potent means of readjusting vascular equilibrium, while the hot flaxseed poultice removes active congestion and assists in ultimately bringing about the same result. Where the chest or abdomen is the seat of injury the poultice is indispensable. Nourishment should early be supplied to the child, and a desire for it is a most favorable symptom. Whenever the pupil is contracted and the eye bright, brom. potass. or of soda, along with chloral, may be given with confidence, and opium as a rule is contraindicated. On the other hand, when both pupils are large and the eyes stare into vacancy, then opium will most probably exert a kindly influence.

PRIMARY CANCER OF THE LUNG.*

BY G. W. H. KEMPER, M.D.

If the study of common diseases is interesting because they *are* common, the study of rare diseases is equally interesting because they are *rare*. Both classes demand a special consideration. The common we have always with us, and their study is rendered comparatively easy. The rare occur at unknown

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intervals, and unless we are careful to utilize the information gained from them, the fleeting opportunities pass and we are not benefited by them. This is my apology for introducing the subject now under consideration.

D. H., male, aged forty-six years, had usually enjoyed a good degree of health, with the exception that at intervals for some years past he had suffered with dyspeptic ailments. About the 20th of November, 1880, he consulted me in regard to chills, which occurred nocturnally about two o'clock, and were followed by a paroxysm of fever of two or three hours' duration. These paroxysms recurred every night for nearly two weeks, notwithstanding large doses of quinine and Warburg's tincture. A self-registering thermometer left with the patient for several nights showed that the highest temperature reached was 102°. About this time well-marked facial paralysis was developed on the right side, and was present until his death.

From the first to the middle of December he was troubled with indigestion, and complained of pain in the stomach and right side of his chest. These symptoms were relieved by ordinary treatment. From the middle of December to the first of February, 1881, he was able to make necessary visits to my office. During this period he complained of a general malaise and occasional pains in stomach and right side of chest. The thermometer indicated no fever. For this condition a general tonic treatment was prescribed.

I first visited him at his home on the 2d day of February, from which date he was unable to leave his residence except to ride out on one or two occasions. He appeared anxious about his condition—noting his pulse, evacuations, appetite, etc., and inquiring about thermometric observations. His appetite was moderately good. He was unusually restless at night.

About the middle of February a slight dullness first appeared over a portion of the lower lobe of right lung. No râles were present, and, I may state, were never developed in his entire course of illness. The dullness gradually and slowly extended upward until, by the first of May, it had involved the entire

right lung. With the dullness, pain increased; and as he would map out the painful spot, I found it corresponded accurately with the area of dullness. After dullness had existed for some days, complete flatness supervened and followed the same slow course upward until the whole lung was involved to such an extent that even bronchial respiration was abolished. A few times, for only a day or two, a bulging of the intercostal spaces of the right side was present, due apparently to swelling rather than to presence of a fluid.

By the first of May emaciation was developed and extended over his whole surface, affecting his extremities most markedly. His skin was slightly sallow; appetite capricious; bowels usually constipated and necessitating laxatives or enemata. Pain was now a most distressing symptom, appearing at irregular periods and characterized as lancinating, boring, and tearing. About the date last mentioned edema of the right hand was noticed, and increasing, extended upward until the shoulder was involved. A cervical gland just above the right clavicle enlarged to the size of a hen's egg.

I did not discover fever after the first attack in November. His usual temperature was 97°. During the last few days of his illness he exhibited slight delirium, but usually his mind was clear amid the most intense physical suffering, and he longed for death as a welcome friend. On the 30th of May an expectoration of simple mucus began, and continued until his death. The physical signs of the left lung were always normal, barring the supplementary respiration. No specific course of treatment was pursued, as the diagnosis was malignant disease of the lung. During the last month of his illness increased doses of opiates and chloral became necessary. He died on the 5th day of June, 1881—about six and a half months after the time he first applied for medical aid.

Autopsy twenty hours after death. The lungs only were examined. The entire right lung was involved, and presented a solidified, contracted mass; some portions resembled a cartilaginous, cheesy substance, gritty on section, while other por-

tions presented a similar appearance, except a softer consistence and devoid of grittiness; yet other portions resembled liver in consistence, and lighter in color than the lungs in gray hepatization. The bronchial tubes were completely obliterated, so that the entire organ was impervious to air. Every portion of the mass sank readily in water. The left lung showed no appearance of cancer. The microscope gave confirmatory evidence of cancer.

In order to afford additional information upon this rather obscure subject, I have collected from various sources seven additional cases of primary cancer of the lung, and arranged the principal facts conveniently for study at a glance.

CASE I. Male; adult; left lung. Total absence of all pulmonary sounds on left side above third rib. Dry cough, scanty expectoration; anorexia and failure of strength; eventually dyspnea with expectoration of clotted blood. Supposed cause a heavy blow on left breast; diagnosis made during life. Autopsy: medullary cancer; no metastasis. Duration of disease, thirteen months. (Cin. Lan. and Clin., vol. 4, p. 140.)

CASE II. Male; aged thirty; both lungs. Left infra-clavicular region very dull on percussion; same region posteriorly much clearer but less than normal; left side one and a half inches larger than right; apex of right lung presents dullness, but less marked than left; eventually nearly the whole of left lung became impervious to air and dullness increased over the right. Severe pain on left side anteriorly, shooting through to shoulder; dry hacking cough, devoid of expectoration, in the morning; temperature and pulse normal; edema of both arms; toward the last severe attacks of dyspnea; no pain. Diagnosis: malignant growth, perhaps aneurism. Autopsy: entire left lung cancerous; less portion of right; few secondary deposits in the liver. Duration, probably less than a year. (Dr. van Giesen, Med. Record, vol. 16, p. 495. Report to N. Y. Path. Soc.)

CASE III. Male; aged fifty-eight; both lungs. At first marked dullness under left clavicle for about three inches; later flatness over entire left lung in front, dullness behind; at left apex in front feeble bronchial breathing; below, absence of all sounds; posteriorly, same side, bronchial breathing loud and superficial at apex, feeble and distant below; on the right side, posteriorly, feeble inspiration and prolonged expiration; a slight cough expectorating simple mucus; pain and soreness in

sternal region; dyspnea on exertion and weakness. Suspected malignant growth during life. Autopsy: entire left lung more or less solidified; right slightly infiltrated; medullary variety; secondary miliary deposits in both kidneys. Duration of disease about four months. (Dr. Ripley, Med. Record, vol. 18, p. 691. Report to N. Y. Path. Society.)

Case IV. Female; aged fifty-one; right lung. Posterior portion right lung dull on percussion; vocal fremitus increased; deficiency of breathing in front. Cough with copious expectoration; orthopnea; edema of chest and arms, and side of head; great pain. Symptoms mistaken for pneumonia; walked about the day she died. Autopsy: malignant tumor in lower right lung. Duration of disease two months. (Dr. Page, The Lancet, vol. 2, 1862, p. 489.)

Case V. Male; aged twenty-five; left lung. Deficiency and absence of respiratory murmurs over left lung; dullness on percussion and absence of vocal fremitus. Dyspnea; cough with expectoration of blood; later pain in left side; great dyspnea; expectoration of a ropy fluid streaked with blood. Began in upper part of lung; finally had fainting fits and giddiness. Autopsy: upper two thirds of lung cancerous. Duration of disease about six months. (Dr. Ward, The Lancet, vol. 1, 1867, p. 238.)

Case VI. Male; aged five and a half months; both lungs. Percussion elicited a clear sound over both lungs; feeble breathing with occasionally a few faint râles. Extreme emaciation; dry skin; short dry cough but no dyspnea. The child was strong when born but soon began to lose flesh; no family history of cancer. Autopsy: lungs loaded with hard, white nodules varying in size from a millet-seed to a pea. (Dr. McAldowie, The Lancet, vol. 2, 1876, p. 570.)

Case VII. Male; aged forty-three; right lung. Complete dullness over upper part of lung; vocal fremitus unchanged; bronchial breathing in all upper portion; no râles; respiratory murmur gradually abolished down the lung until it disappeared. Swelling of neck and face; enlargement of superficial veins of chest and abdomen; expectoration of blood, and finally bloodstained pellets; voice cracked and harsh. Toward the last he had attacks of breathlessness and extreme drowsiness; walked about to the day of his death. Diagnosis made during life. Duration of disease nine months. (Dr. Salter, The Lancet.)

If we consult our text-books on the subject under consideration, we are generally surprised at the meagerness as well as the unsatisfactory descriptions of the disease. Ziemssen makes

no mention of cancer of the lung, except in four lines, to state that it is one of the causes of stenosis of the trachea and bronchi. Reynolds's System of Medicine, however, contains an elaborate article upon the subject. As practical knowledge of this disease is greatly to be desired, some points in connection with the foregoing cases may prove interesting.

The ages of the eight patients mentioned ranged from five and a half months to fifty-eight years. The case of the infant is unique. Eberman gives statistics to show the age most liable to be attacked, and records seventy-two cases; but all occurring after the first year, and only one before the age of nine (McAldowie).

All writers agree that males are more frequently attacked. Of the eight cases, seven were males and one a female.

Loomis* claims that primary cancer usually involves but one lung, while secondary cancer affects both. The right lung is more frequently involved than the left. Of the eight cases which I have given, in three both lungs were implicated, while in the remaining five only a single lung was affected; of these five, three times it was the right, twice the left. Reinhard publishes a statistical report embracing twenty-seven cases of primary cancer of the lung. In all of these only one lung was involved—eighteen times the right, and nine times the left.†

It may be stated quite definitely that there are no pathognomonic symptoms of pulmonary cancer known to us. By reference to the column of symptoms it will be seen that a variety was presented. A cough was frequently present, but not always. The expectoration was slight or copious or wanting, and when present consisted of simple mucus, blood, clotted blood, and blood-stained pellets. In case No. 7, Dr. Salter, in stating the fact that the sputum of all common lung affections is characteristic, and mentioning the blood-stained pellets, says, "I felt, on looking at it, that I had never seen any thing like it before; and this was the first thing that convinced me that we had to deal

* Diseases of the Respiratory Organs, p. 118.

† Shrady, Editorial, Med. Rec., vol. xviii, p. 686.

with some state altogether exceptional." Loomis and Flint mention as characteristic a currant-jelly expectoration. I find no reference to such matter in the recorded cases.

In some cases pain was a prominent feature, while in others it was singularly absent. Shortness of breath and dyspnea accompanied a majority of the cases. Edema and swelling of the superficial veins of the affected side, or both sides, was a common symptom. In case 7 engorgement was the very first symptom that presented itself. The swelling of the patient's face and his inability to get the neckband of his shirt together were the first things that arrested his attention at a time when he believed himself to be in perfect health; and it was some two months later when the next symptom—dyspnea—showed itself. Emaciation and loss of strength were not as prominent features as by reasoning we might be led to suspect. Two of the patients walked about until the day of death. My own case was complicated with facial paralysis; possibly it was only a coincidence.

There are no characteristic physical signs of the disease. In the early stage of most cases, and even the latter stage of some others, no light is thrown upon the diagnosis. At best, the evidence is but supplemental. Diminution of the respiratory murmur terminating in complete absence, with dullness and eventually flatness on percussion, is the usual course. Finally, the duration ranged from two to thirteen months, and for the eight cases averaged about seven months.

The diagnosis of cancer of the lung is not always an easy task. In four of the cases given, a diagnosis was made during life; in one the disease was suspected to be malignant; in one it was mistaken for pneumonia; and in another it is not stated. In the case of the infant, Dr. McAldowie says, "Although in this case some malignant affection was suspected, it was solely from the emaciation and cachetic appearance of the child."

The enlargement of the superficial veins is a valuable diagnostic aid. Such a condition forms no history of the ordinary lung-diseases. It shows an obstruction to the circulation of the

blood in the large veins of the chest, especially the descending vena cava—a retardation—and nature does for the venous system as she does for the arterial—establishes a collateral circulation. The disease may first invade the lower or the upper portion of the lung. Loomis is mistaken when he says, "In cancer the percussion dullness does not begin at the bottom of the chest." Dyspnea was a common symptom, and is especially valuable when associated with edema of the chest and upper extremities.

The diagnosis once made carries with it the prognosis, and even the therapeutics. We may only hope to palliate, and so conduct the doomed patient to an euthanasia. As Dr. Salter says, "Probably our really efficient pharmacopeia for such cases begins and ends with opium."

MUNCIE, IND.

HOT WATER IN SURGICAL PRACTICE.*

BY J. R. WEIST, M.D.

In surgery, as in every other department of our profession, methods of treatment simple and of easy application commend themselves to the careful practitioner. Yet it is a curious fact that measures complicated and of doubtful utility are much more readily adopted. There are probably two principal reasons for this. The entire profession is not yet emancipated from superstition, and means difficult to apply, and whose *modus operandi* are but little understood, furnish more room for the exercise of "faith" and ground for vague and unending speculation as to their merits and methods of action. Patients groping in still more profound ignorance in relation to the difference between physiological and pathological conditions, and of the

*Read before the Indiana State Medical Society, May 10, 1882, and published in advance of the transactions, by permission of the Publishing Committee.

action of agents in changing the latter into the former, have a still greater faith in medicines or plans of treatment about the action of which they can form no intelligent ideas, and in consequence of this, the professional attendant is often valued in proportion to the cost of his remedies or the mystery with which he surrounds them.

Simple plans of treatment for these reasons are slowly adopted, and when they are, bring less renown and less pecuniary gain than their opposites. Changes, however, are slowly going on in the people, and each succeeding year requires a higher degree of intelligence and scientific knowledge from the physician and surgeon, and this demand must continue to increase because of the sharp struggle for place in the ranks of our overcrowded profession. There is hope, therefore, that ultimately the simple methods of relief and cure will be recognized at their full value and adopted in practice.

The purpose of this brief paper is to direct the attention of members of the Society to an agent simple, cheap, of easy application, and of great value in surgical practice. This is hot water.

The value of hot sinapisms and poultices for the relief of pain in certain surgical diseases is universally recognized. Every one is familiar perhaps with the use of hot applications in certain inflammations, in abscess, epididymitis, sprains, etc.; but it is not, I think, generally believed that their value extends much beyond their power to relieve pain. Yet it is certainly true that in hot water we possess a most powerful agent for the prevention of inflammation and for the control, when established, of the pathological tissue-changes we associate together under this name. The leading gynecologists are fully aware of the value of hot water in this direction, and make extensive use of it by vaginal injections to relieve congestions and inflammation of the pelvic organs; and while, as Dr. Emmet says, "it is not a *cureall* for these affections," it is of such great value that were its worth generally known much of the cauterization, intra-uterine medication, scarification, and other operative measures would go out of ashion, greatly to the relief of suffering women.

It is to the value of hot water as a hemostatic agent, however, that I wish to direct chief attention, especially to its power, when the bleeding is from small vessels, or of the character denominated capillary oozing—a fact, I believe, first brought prominently before the profession by Dr. Emmet, in his Principles and Practice of Gynecology, and he gives the late Dr. Pitcher, of Detroit, credit for first calling his attention to the matter. He says that while operating, in 1859, to close a vesico-vaginal fistula where free incisions were necessary, "the progress of the operation had been greatly delayed in consequence of oozing of blood." This could be temporarily checked by pressure and ice, but in a few moments reaction would take place and the bleeding be as great as before. Dr. Pitcher being present, suggested a sponge probang be dipped into hot water and applied several times to the bleeding surface. This was done and the bleeding was promptly arrested. This led Dr. E. to the frequent use of vaginal injections of hot water in various uterine and pelvic disorders associated with capillary congestion. Surgeons seem to have failed to appreciate the hint thus given, as no surgical work with which I am acquainted gives any prominence to the hemostatic properties of hot water. Generally it is not mentioned in this connection. I shall merely mention some of the cases in which its power to control hemorrhage has in my experience been of signal service.

In ovariotomy, after the separation of extensive adhesions, there is frequently a very annoying oozing of blood that must be arrested before closure of the abdominal cavity if septicemia and the subsequent death of the patient is to be prevented. In such cases the repeated application of sponges dipped in hot water will generally promptly arrest the bleeding, succeeding even in cases in which the solution of the persulphate of iron has failed.

In cases of hemorrhage, after removal of uterine fibroids, the injection of hot water into the uterus succeeds in cases which would otherwise require the use of the tampon, a fact first made public by Dr. Windelband, in 1875, who recommended the same

treatment for the arrest of hemorrhage following abortion. Dr. W., however, ascribed the success of the method more to the power of the hot water to induce uterine contractions, than to its influence directly upon the open vessels.

The value of this agent during and after operations for the closure of vesico-vaginal fistula has been clearly pointed out by Dr. Emmet, as already mentioned, and all that he states in its favor I have frequently verified in operations of the same kind. In operations for old lacerations of the perineum, when an extensive surface must be freshened, bleeding is often quite free. This can generally be readily arrested by the frequent application of sponges saturated with hot water, and by a method suggested to me by Prof. Reamy, of Cincinnati. The paring of the tissues can be done with almost the same precision and rapidity as upon the cadaver. An assistant by means of a syringe causes a constant stream of hot water to flow slowly over the field of operation. This simple maneuver not only washes away the flowing blood, but almost entirely arrests it. The entire field of operation remains in plain view, greatly to the comfort of the operator and to the advantage of the patient. In this operation as well as in that for closure of a vesico-vaginal fistula, the repeated injections into the vagina of water as hot as can be borne by the patient just before commencing work greatly lessens the subsequent bleeding.

Over the oozing from stumps after amputations, after removal of tumors, the superior maxillary bone, excision of the mammary gland, and various other operations, hot water has in my experience exercised a most important influence.

A very great advantage that hot water has over most other agents employed to arrest the kind of hemorrhage under consideration, is that it does not interfere with the subsequent healing process; it is possible that it promotes it.

I lately amputated a young man's thigh at the lower third. During the operation hot water was freely used until all oozing ceased. No pain followed the operation. On the third day the drainage-tube and the sutures were removed, the flaps being

completely united except where separated by the drainage-tube and ligatures. On the fourth day the patient was dressed and going all over the house on crutches. On the sixth day he was about town on crutches, having no pain and no suppuration of the wound; the wound was indeed healed except along the track of the ligatures.

Two weeks since I operated on a lady seventy-two years old for carcinoma of the mammary gland. The diseased gland was large, weighing over three pounds; an extensive wound was therefore unavoidable. During the operation hot water was freely used, torsion was applied to the arteries, and the edges of wound approximated, contrary to my usual practice. At the end of three days the drainage-tube and the sutures were removed. At the end of five days the wound was entirely healed, except a small point at either angle through which the drainage-tube had passed, there having been no suppuration.

I do not claim that the extraordinary results seen in these two cases were owing wholly to the use of hot water, as I am sure that perfect drainage and methodical compression were important factors; but they are sufficient to establish the fact that the free application of hot water to wounds does not interfere with the healing process. I believe it hastens it. The contraction of the capillary vessels it induces continues for some time after its use is discontinued, and it is well known that the amount of blood in an injured part is an important factor in the development of inflammation. In this connection it will be remembered how great an influence the ligation of the principal artery of a limb has upon an inflammation in progress below. Additional evidence upon this point I have already given when speaking of the conservative influence of hot water in certain idiopathic and traumatic inflammations, where there are no open wounds. Nearly all other hemostatic agents hinder, if they do not render impossible, the direct repair of injured tissues.

Cold water and ice, even, is much less efficient in checking hemorrhage than hot water. The immediate effect of cold is to contract the bleeding vessels, but this contraction is very soon

followed by the opposite condition, dilatation; one that continues for a considerable period, and one that favors further hemorrhage. Besides, it is a fact well established that prolonged cold lowers the reparative power of tissues.

The immediate effect of heat is to dilate the vessels, but afterward it contracts them. Dr. Pitcher's explanation of the manner in which hot water arrests hemorrhage is that the clot formed in the mouth of the dilated vessel, was held so firmly in position by the subsequent contraction as to prevent its being readily dislodged.

In hemorrhage from the nose, the injection of hot water has in my hands proved very effective, and I am persuaded that in pulmonary hemorrhage the inhalation of hot water in the form of steam would prove to be a valuable agent for its arrest.

The value of hot water in hemorrhage and inflammation depending on its power to contract the smaller blood-vessels, and this lessens the flow of blood to and the quantity in a part, involves some interesting physiological questions. Capillary vessels possess no muscular elements and can be subject to no active change of caliber. The changes in diameter that do take place in them are passive, and by virtue of their elasticity; and all the important changes therefore effected in a given part by hot water must be through vessels—arteries—larger than capillaries, whose walls contain muscular elements which are excited to action by nerve stimulation. This may probably be accomplished in two ways. Foster says (Text-book of Physiology, p. 170), "The change in any given vascular area may be brought about by stimuli applied to the spot itself and acting either directly on the local mechanism (vasomotor) or indirectly by reflex action through the general vasomotor center." These physiological questions, however, I am not competent to discuss, and I leave the subject with the remark that whatever may be the mechanism through which the effect is accomplished, it is certainly important to know that in hot water we have a simple, cheap, and effective means for attaining important ends in surgical practice.

RICHMOND, IND.

FOREIGN CORRESPONDENCE.

My Dear Yandell: LONDON, May 18, 1882.

The death of Charles Darwin is a loss of one of the greatest minds the country has produced. And though he died at a ripe old age, he was still in the maturity of his intellectual powers, and was engaged in completing the work which he commenced half a century ago. From his last work on worms and mold, it is probable that the professor foresaw that his end was near. Eminent divines have thundered from the pulpit against what has been termed Darwinism, believing that the theory of evolution struck at the very roots of religion; but now the nation has awarded to Charles Darwin the highest national tribute, a tomb in Westminster Abbey. There he lies side by side with our great statesmen and warriors, philosophers and poets.

A clinical lecture was delivered last week at University College Hospital by John Marshall, F.R.S., the senior surgeon to the hospital. The subject of the lecture was "Colectomy," or excision of a portion of the colon.

B. B. —, aged forty-nine, a married woman, was admitted to the hospital on April 8th, suffering from chronic intestinal obstruction. The seat of the obstruction could not be diagnosed; the symptoms increased rapidly in severity to such an extent that an exploratory incision was decided on. April 15th a median incision was made, extending almost from the umbilicus to the pubes. An ounce or two of clear fluid ran out. The colon presented in the wound and was found healthy; the sigmoid flexure was then examined and found empty and normal both to eye and touch. On following up the descending colon, a mass nearly the size of a hen's egg was found between the kidney and the iliac crest. As no impression could be made on it by the finger, the conclusion, that it was a growth and not a fecal impaction, was obvious. There being no free mesentery to this portion of the bowel, it was quite impossible to bring the latter out through the mesial wound, though an attempt was

made to do so. This wound and the intestines protruding from it were covered with a guard, the patient turned on her right side, and an incision three inches long was made parallel to the last rib, and an inch and a half above the posterior half of the crest of the ilium. This incision was carried down to the tumor, the peritoneum opened, and the colon pushed through the wound and tied temporarily with thick catgut ligatures, one above and the other below the new growth. The growth, with an inch of intestine on either side of it, was then removed. The strong ligature on the upper piece of bowel being removed, a quantity of semi-fluid, offensive feces escaped. The wound in the median line was closed and the two ends of the bowel were fixed in the lateral incision. Both wounds were dressed antiseptically. Up to the 17th April the patient did well; the temperature kept about normal and the bowel relieved itself freely; there was no vomiting and the abdomen appeared flat. On April 17th, in the afternoon abdominal pain began, but was relieved by opium till 2:30 A.M. on the 18th, when it returned and persisted, in spite of opium and hot fomentations. The bowel now ceased to act, the knees were drawn up, and vomiting set in, and continued till death, at 4:30 A.M., the temperature during the last twenty-four hours was 97.2° to 98°; the pulse 128, its quality showing progressive heart-failure.

A post-mortem examination was made ten hours after death. The abdomen was moderately full. The median wound was healed and was not adherent to the intestines. There was diffuse peritonitis starting from the lumbar wound. Secondary growths were found in the liver; the kidneys were granular. Microscopic examination of the liver showed the growths to be a columnar epithelioma. The diseased mass, which was removed with a piece of intestine, was about an inch and a quarter long and so thick as only to have a channel through it as wide as a No. 8 catheter. Its thickness was uniform all round the gut. The epitheliomatous character was undoubted.

A successful case of gastrostomy for cancer of the esophagus has been performed by Thomas Bryant, F.R.C.S., at Guy's

Hospital. The operation was performed on a somewhat unusual plan, namely, that the stomach was not opened till the eighth day after the original operation, when it had thoroughly united to the external wound, when a small opening was made with a tenotomy knife. Mr. Bryant's notes on the case, with the omission of some of the minor details, are as follows:

Mr. A. B. H., aged sixty-five, a well-to-do farmer, came under Mr. Bryant in November, 1881, his chief symptoms being dyspepsia and occasional regurgitation of food. On examination of the esophagus with bougies a stricture was detected at the lower end, through which no instrument could be passed. The symptoms increased in severity and gastrostomy was decided on. December 3d: Under the carbolic spray Mr. Bryant made an incision three inches long about half an inch below the margin of the left ribs, and parallel with them. All the structures were divided down to the peritoneum; after the bleeding vessels had been secured the peritoneum was divided. The stomach then presented itself and was at once seized and brought forward by means of two loops of silk which were passed through the visceral layer of peritoneum and left lung. The stomach was next fastened by interrupted silk sutures to the margins of the wound, the sutures including the muscles and parietal peritoneum on the one hand, the visceral peritoneum on the other. The stomach was not opened. No symptoms of serious importance followed the operation; there was occasional nausea unaccompanied by sickness; the bowels were opened every day; enemata and suppositories were given every day and half a pint of milk was taken by the mouth every twenty-four hours. December 10th—the eighth day: Mr. Bryant gently elevated the stomach by means of the loops above mentioned, and opened it by an incision an eighth of an inch long, made with a tenotomy knife. All sutures were removed. A tube, the size of a No. 9 catheter was introduced through the wound, and the patient was fed through it with a few ounces of warm milk, none of which escaped on the removal of the tube. No bad symptoms occurred, the bowels were opened, the motions

became solid, the patient gained in weight and strength, and there was no regurgitation of food through the opening; the worst symptom was dryness of the mouth, which aggravated the patient. On the 23d the patient got up for the first time; a No. 10 tube was introduced, as the original piece frequently got blocked, making feeding tedious. April 2d—four months after the operation: The stomach retains food well; the bowels are regular and the motions healthier than they have been for many months. The nutrient suppositories are of great value. Mr. H. remains down stairs eight or nine hours every day and gets about in a bath-chair. May 2d: He is as last reported.

In almost every criminal trial of late some medical person has come forward with the suggestion that the prisoner was insane; to this the materialistic philosophy of the age, which tends to regard man as a mere machine wound up to perform a particular set of actions and obey certain impulses, lends especial force. It can not be doubted that public safety and public morality are endangered from this cause. In the case of McLean, who shot at the Queen, there could be no doubt about the question; the man had been in an asylum, and there was abundant and conclusive medical evidence to show that he was the victim of homicidal mania. The case of Lamson, who was convicted of poisoning a cripple boy who stood between him and a considerable fortune, was very different. He was an educated man, and though he may have injured his mental faculties by the systematic abuse of morphia and atropia, which he used for the purpose of procuring sleep, there was not a particle of evidence in favor of insanity. But it would surely be absurd for a State to allow self-made stupidity or excitability to be accepted as an excuse for a hideous murder deliberately planned for the pecuniary benefit of the perpetrator. If a man is to be pardoned a crime because he has taken morphia, surely then ought every drunkard to be excused whatever crimes he has committed, in which case justice had better throw her scales into the sea and cross the channel in a balloon. It is to be hoped that capital punishment will before long be altogether abolished. It is a

relic of a barbarian age, and savors rather of vengeance than of the correction for crime and the protection of the public. Again in the case, which is not altogether unknown, of the wrong man being hanged, what restitution can the State make? To him, none! To his widow, ample apologies and five hundred dollars!

Talking about criminals, there has been some discussion on the subject of prison-diet. A man died who had just completed a month's imprisonment in Chester Castle. Deceased was so weak at the expiration of the term that the relieving officer was requested to remove him to the workhouse, where he died a few minutes after admission. The evidence went to show that he was weak and ailing when first taken to the prison, and the medical officer stated that he found him suffering from angina pectoris and mitral disease. On this account he was excused hard labor, but kept in the ordinary prison-cell, and for the first week received the diet of the first class, which consisted daily of eight ounces of bread for breakfast, three ounces of oat meal, and three ounces of Indian meal, made into a stirabout with water, for dinner, and eight ounces of bread for supper. During the remainder of the time he received for breakfast six ounces of bread and a pint of gruel and the same for supper; twice a week for dinner, six ounces of bread and eight ounces of suet pudding; twice a week six ounces of bread and eight ounces of potatoes; and on three days half a pint of soup made with four ounces of shin of beef. Ten days before the patient's discharge he was admitted to the infirmary, but the same diet was continued without additions. The jury found that the deceased died from natural causes, accelerated by the want of a more nutritious and generous diet. Neither of the two dietaries could be maintained as suitable to a feeble man, suffering from angina and mitral disease. But apart from the question of sickness, it is evident that the prison dietaries have been drawn up utterly regardless of physiological facts. In the first place, the quantity of albumen is far too small in comparison to the starches to maintain the proportion of carbon to nitrogen which is found to be neces-

sary to preserve the balance of combustion in the human body. And in the second place, it has been proved by experiment that the deprivation of fat is not well borne, even if starches be freely given, and the great improvement which occurs on giving fat in many cases of obscure malnutrition proves that the ill effect of partial deprivation of fat is both more common and more serious than is supposed. The result of this new prison dietary is shown in the increased number of coroner's inquests, and in the fact that prisoners who have served short terms often leave gaol so weakened as to be totally unfitted for obtaining or resuming honest labor.

Dr. Charteris, Professor of Therapeutics at Glasgow, publishes a case in this week's Lancet to show that iodine and iodide of potassium are identical in their action. A woman, aged thirty-five, was admitted into Glasgow Infirmary suffering from chronic rheumatism. She was put on ten-grain doses of iodide of potassium three times a day. Half an hour after taking the first dose she complained of slight itching of the nose and tenderness of the nasal and conjunctival mucous membrane. This increased till, after taking the third dose, small shot-like elevations appeared inside the knees and spread all over the body; the papules disappeared within twenty-four hours of leaving off the medicine. A similar result had obtained on a former occasion when she had taken iodide of potassium.

Deeming this case with such marked idiosyncrasy for iodism a suitable one to try if a similar result would be produced by the internal administration of iodine, Dr. Charteris ordered her five minim doses thrice daily. No effect was produced till the dose was increased to twenty drops three times a day, when all the symptoms of iodism occurred, similar to those produced by iodide of potassium.

Before the Medical Society last week, Mr. Lund, of Manchester, read a paper on a new method of treating simple transverse fracture of the patella. On the assumption that the chief, if not the only, cause of non-union in such cases is imperfect apposition of the broken fragments, so that actual contact of the osse-

ous surfaces is not attainable, Mr. Lund has adopted this plan: For the first six or eight days the limb is kept extended on a backsplint with a foot-piece and slightly raised; cold evaporating lotion, or ice, is applied to the knee until all or nearly all effusion, internal and external, has disappeared. Then, while the patient is under an anesthetic, a strong steel pin is drilled through each portion of the patella, from the external to the internal border, a small hole being made in the skin by the entrance and exit of the pin, great care being taken by the mode in which the patellar fragments are pierced that the articular surfaces of the bone are not injured by the point of the screw. These screw-pins, which should be placed as nearly as possible in parallel lines, are drawn very closely together until the broken surfaces of bone are brought in contact by means of a double screw instrument, which for the time holds them firmly in position. While so placed the ends of the pins are inclosed in a coil of very thin copper wire, so arranged in repeated turns as to gain great strength, and then, when the pins are completely fixed, the double-acting screw instrument is removed, the broken surfaces of the bone remaining in absolute contact. Mr. Lund demonstrated the method very clearly by using the knee-joint from an artificial leg, in which the patella was represented by two pieces of cork, kept apart by elastic bands, and covered by a knee-cap to represent the skin. He gave particulars of two cases so treated with excellent results, and also a third now under treatment at the Manchester Infirmary. Contrary to what might have been expected, these pins do not cause any local or constitutional disturbance, although retained *in situ* in the first case for thirty-seven days, in the second case for forty-three days, when osseous union was obtained. Mr. Adams believed that often even ligamentous union failed and that only a periosteal fibrous union took place. A true ligamentous union would not stretch to a greater extent than an inch. He had obtained fairly successful results with Malgaigne's hooks, getting very short ligamentous union; and had never seen any ill results from their use, though such had occurred at King's College

Hospital. Mr. Royes Bell said the patient alluded to by Mr. Adams was a middle-aged woman in broken health. Erysipelas set in about the punctures of Malgaigne's hooks, and suppuration extended into the joint, causing death. In a case of his, where ligamentous union took place, the patella was subsequently fractured in another place, the ligamentous union remaining intact. In a case of double fracture, one patella was treated with, the other without, Malgaigne's hooks. The union in the case treated with Malgaigne's hooks was decidedly better than that treated without them. Several other members then spoke, after which the President, Mr. Francis Mason, said he had found the results of the ordinary treatment satisfactory. In bad cases he had used a method of bringing the fragments together by pins. Mr. Lund, in reply, said that Malgaigne's hooks were apt to cause tilting of the fragments. In one case he thought he obtained bony union. Very little irritation was caused by the rods and no callus was induced. He would only use his method in recent fractures, and not in broken constitutions. He had seen very satisfactory results from section of the rectus muscle. The advantage of his system over Malgaigne's was that the former brought pressure to bear on hard tissues, the latter on soft tissues liable to suppurative inflammation.

Reviews.

A Treatise on Albuminuria. By W. Howship Dickinson, M.D., Cantab. Second edition. New York: William Wood & Company. 1881. 8vo. Pp. 300.

The author's object in writing this volume is "to remove some of the obscurity and confusion in which the subject has been involved by establishing such demarcations as are suggested by morbid anatomy and warranted by clinical observation."

After a short reference to the structure of the kidney, albuminous urine and fibrinous casts in their general relation to the pathology of the kidney are considered. Following this is given the pathology, symptoms, causes, and treatment of nephritis in general. One hundred and twenty pages are devoted to the *special* consideration of granular degeneration and lardaceous disease of the kidneys, the pathology, clinical history, symptoms, and treatment being presented in detail. There is a most interesting chapter on alcohol as a cause of renal disease.

Sir Robert Christison says that three fourths or even four fifths of the cases of granular disease of the kidneys which occur in Edinburgh are referable to a greater or less degree of intemperance. Dr. Dickinson is not inclined to think that alcoholic and malt drinks are the special causes of renal diseases, and maintains his position with much plausibility. Autopsies of fifty-eight cases of delirium tremens and fifty-eight cases of death from accident, taken from the records of St. George's Hospital, give the following results: In the patients dying from delirium tremens there were fifteen instances of congestion and fifteen of disease of kidneys. In the patients dying from accident, there were seven instances of congestion, and seventeen of

disease of the kidneys. Another statement of autopsies is compiled from the same source, comparing the renal pathology of those in any way connected with the liquor trade with the working class of non-alcoholic pursuits. This comparison shows only a small per cent more of renal maladies in those engaged in the liquor traffic. It is incidentally mentioned that in these series of cases, cirrhosed liver was found in a large number of the cases of delirium, and in those engaged in the liquor trade.

There are eleven plates, some of them colored, and thirty-one woodcuts illustrating thoroughly the subject-matter. This book can be recommended as one among the best, in its special field, in the English language.

A. M.

Manual of Dental Surgery and Pathology. By ALFRED COLEMAN, L.R.C.P., F.R.C.S. Exam. L.D.S., etc. Thoroughly revised and adapted to the use of American Students and Practitioners. By THOMAS C. STELLWAGEN, M.A., M.D., D.D.S., Professor of Physiology at the Philadelphia Dental College. Philadelphia: Henry C. Lea's Son & Co. 1882.

This is the work of a dental surgeon who, besides being lecturer at St. Bartholomew's Hospital on this very important branch of surgery, is also senior dental surgeon to that institution. The author brings to his task a large experience, acquired under most favorable circumstances. His standing in London is very high. There have been added to the volume a hundred pages by the American editor embodying the views of the leading home teachers in dental surgery. The work therefore may be regarded as strictly abreast with the times and as a very high authority on the subjects of which it treats.

Clinic of the Month.

DIABETES, ITS TREATMENT.—E. A. Cook, Ph.D., L.R.C.P. and S.Ed., L.F.P.S.G., writes to the Practitioner that:

Whether the primary lesion in diabetes has been caused by sudden imbibition of cold liquid, or in some other way, it is certain that the quantities of liquid habitually consumed by diabetics must be very hurtful to digestion. The peptic glands would pour their secretion into a mass of diluting fluid, but little food could be rendered fit for absorption, and this fluid is absorbed, carried by the veins partly to the general circulation, partly to the liver, and thus the blood must be constantly diluted. In treating such cases we must endeavor to decrease the water consumed. This is very difficult to effect while so much urine is passing away, for if the patient denies himself liquid by force of will, a kind of ravenous state sets in, and life is unbearable. While the sugar is constantly produced it must be as constantly eliminated, and to effect this by the kidneys a certain amount of water is necessary. The state of the case in such patients seems to necessitate a choice of evils. If you seek by drugs or by deprivation of fluid to diminish the amount of urine, sugar accumulates in the blood. If water be allowed in the quantity required, the patient dies from want of nutrition, because the digestive organs are unable to act, and the blood is depleted of other life-sustaining substances.

In dealing with these symptoms we must not neglect the morbid physiological states produced by them; we must not hope for permanent improvement by administering drugs which increase morbid conditions. If in a disease like phthisis it is so well recognized that opiates are prejudicial in consequence of their action in disordering the stomach, how much more strongly should this fact be borne in mind in the treatment of diabetic symptoms? Doubtless a temporary apparent improvement is sometimes manifest from their use, but it is at the cost of a real decline in vital power; or if a real improvement is effected, it must be by some occult special action on the special lesion in these cases, and no generalization can be made. The dia-

betic symptoms in the order of their importance, when well established, are: 1. Excessive thirst; 2. Constipation; 3. Lack of digestive powers; 4. Twitching of muscles, especially those of the lower limbs; 5. Weakness; 6. The excretion of excessive urine and sugar; and it is in this order that treatment is most urgently demanded.

Any one who has watched a well-marked case will not need to be convinced that it is of the utmost importance for the comfort of the patient that the hard dry tongue should be kept moist, and if the orifices of the salivary ducts are examined they will be found dry also. The drugs which are known to increase salivary secretion are mercury, nitro-hydrochloric acid, and pilocarpin. The first is in most cases inadmissible; the second is of some value, but pilocarpin is the drug suitable above all others. When administered in one fifth to one third grain doses its general effect is most powerful, and such an administration in diabetic cases would be hurtful; but if a minute dose be applied locally and repeatedly, the mouth can be kept moist. If the nitrate be dissolved in dilute spirit, so that five drops shall equal one twentieth grain, and if this quantity be placed every four hours between the lip and the gum, in a short time a great improvement will be apparent, and as this proceeds the dose can be reduced to one half with advantage. The general effect of this treatment is that the patient demands less liquid.

I have been present at four post-mortem inspections of diabetic patients. The deaths in all four had been sudden, and in all four the intestines presented evidence of most marked constipation, the feces in the lower bowel being exceedingly hard. I do not remember a single case of diabetes in which marked constipation was not a symptom; when it was relieved the liquid taken and excreted was diminished, but the relief was often not possible by ordinary doses or measures; and I have learned that when this state is neglected there is some marked danger of sudden death. An enema passed high up the rectum and of large amount is the most satisfactory method of treatment until a general amendment commences, when this symptom diminishes.

When the diet of a diabetic patient is made to consist almost wholly of non-farinaceous material it is especially necessary that the digestive arrangements be in as good order as possible, and so much the more is this the case if the greater portion of the diet be milk. It is no uncommon thing for a diabetic to drink four or five pints of liquid at once. This must distend the stomach and weaken digestion. The peptic glands may be paralyzed. The best remedy for this state is to give with all meals pepsin and hydrochloric acid, and to allow no

liquids for some little period previous to the meal. In the majority of cases a marked improvement will soon follow this line of treatment—the bodily weight will increase, the constipation will often entirely disappear, and the desire for fluids and the consequent polyuria be diminished.

The urine excreted contains, besides sugar, mineral salts, and when we consider the amount draining away it must at once appear most appropriate to administer some material suitable to replace this drainage. Phosphates are the most essential, and a solution containing no sugar will be required. The following I have prepared in large quantity and administered with much benefit:

Bone ash of femur, ...	1040 gr.
Phosphate of magnesia, ...	800 gr.
Phosphate of potash, ...	1900 gr.
Phosphate of soda, ...	3520 gr.
Syrupy phosphoric acid, ...	q.s.
Water, to	64 oz.

Powder the bone-ash and add four ounces of syrupy phosphoric acid diluted with an equal bulk of water; add the phosphate of magnesia, and leave for twelve hours; dilute with water to forty ounces and filter; dissolve the phosphates of potash and soda in water and add to the clear filtrate; add sufficient phosphoric acid to redissolve any precipitate formed, and make up the bulk to sixty-four ounces. Dose, one dram thrice daily in water.

When the above-described methods of treatment are followed out, the patient suffering from diabetic symptoms has a rational prospect of improvement. The twitching of the muscles, the weakness, the polyuria, may be neglected; they will disappear, as will also the melancholia, the impotence, and the wasting. The sugar in the urine I have never known to disappear entirely, but always to diminish in quantity. It may be there are cases of disease presenting diabetic symptoms in which the whole of the above method of treatment would be of no avail, but I have never seen one in which improvement did not take place if it were used before the last stage of exhaustion had set in; and when recovery has to a certain extent taken place it is not necessary to rigidly enforce it for fear of a relapse.

Benzoic Acid in Polyarthritis Rheumatica.—Senator, in continuation of his observations upon the use of this drug (*Centralblatt f. die Med. Wiss.*), remarks that benzoic acid, or benzo-

ate of soda, has no remedial action of any value in chronic cases of arthritic rheumatism, nor in the subacute non-febrile attacks. Of twenty-two acute cases, however, in which he used this medicinal agent solely, one was relieved in two days, twenty in less than four days, and one in not less than eleven days; none of these cases suffered any relapse or complication. Although it is the experience of the unprejudiced general practitioner that there are certain cases in which almost any simple method of treatment apparently produces relief early in the attack, and to such a surprising degree that he is often led to believe that these exceptional cases would do well even without medicinal treatment, yet Senator, who was at one time rather sceptical as to the value of salicylic acid in rheumatism, seems to believe that the favorable result in the above cases was clearly due to the administration of benzoic acid, and he was further convinced of this fact by another small group of cases, four in number, in which the use of salicylic acid had exerted no remedial action, and yet after its discontinuance a rapid cure was produced by the administration of benzoic acid. In another group of six cases, the use of benzoic acid was not followed by a relief of the symptoms, while salicylic acid produced a beneficial effect. Fourteen cases were also treated by benzoic acid and salicylic acid together, in which the author was inclined to give the preference to the latter. He recommends that the benzoic acid, which can be given in very large doses (fifteen grams per diem), should be administered where salicylic acid has failed to afford relief. (London Practitioner.)

SOME PRACTICAL POINTS IN THE TREATMENT OF HEMOPTYSIS.—Dr. James M. Williamson, of Ventnor, writes on this subject to British Medical Journal:

Constipation must not go unrelieved, and is best treated by salines. A quick pulse must be steadied by digitalis, of which perhaps the most handy form is the digitaline granule of Homolle and Quevenne. Cough is to be soothed, the simpler the mode of accomplishing this the better, but it must be done; and nothing answers better for this than a chloroform pad laid over the sternum.

Speaking in a general way, and not alluding to hemoptysis of cardiac origin, I hold that we should keep before our minds the advisability of stopping all blood-spitting in phthisis without delay. To this rule, perhaps, there are two exceptions. The first is trivial. It is that dirty-red, slimy, bad-smelling, never abundant expectoration which hysterical women with phthisis often exhibit at the bottoms of their spittoons; this may be left to itself. The other exception is a serious one; it comprises those forms of hemoptysis, usually copious and angry, occurring in advanced and very chronic cases where there is a considerable amount of fibroid induration. In such patients, notable dyspnea on exertion has for a long time past been a prominent symptom, and respiration has been maintained by a very small extent of lung-substance. These cases are open to a special danger, that of fatal embolism in the right chambers of the heart or the pulmonary artery. Not uncommonly the course followed is for the bleeding gradually to abate in quantity, remaining, nevertheless, of the same angry red; then urgent dyspnea suddenly sets in, and death takes place within forty-eight hours. These are cases calling for extremely careful treatment. Can it be right, where only a small surface is available for respiratory function, to contract those few vessels with ergot? Or can it be good practice to pass styptic medicines into a patient's circulation when his cachectic state, his low vitality, and perhaps some febrile movement, render him especially liable to the formation of thrombi? It is wisest to limit ourselves to external applications, chloroform pads, dry cupping, sinapisms at a distance, or other derivative treatment, with appropriate general management.

Perhaps I may be allowed to conclude with two cautions, commonplace they may seem, but both of them the outcome of bedside experience. One is, to have some responsible person in attendance night and day, on all cases of severe bleeding, till the attack has completely passed away. Death in hemoptysis is generally sudden, and it is very appalling to discover too late the consequences of omitting this precaution. The other is, to decline positively to examine a patient's chest while there is any hemoptysis. Irrespectively of the danger of the process, an opinion arrived at by auscultating a chest during or immediately after a bleeding is not a reliable one.

IODOFORM IN ULCER OF THE STOMACH.—Mr. J. M. Redmond, of Dublin, reports, in British Medical Journal, the following case:

B. C., aged twenty-one, an unmarried female domestic servant, was admitted on January 21, 1882. She stated that her health had been

tolerably good until about two years earlier, when she was seized with vomiting of blood, which continued for three successive days, accompanied by pain and tenderness in the epigastrium. Since then her health had been considerably impaired. She had been alternately well and sick for days at times.

At the time of admission, the tongue was moist and coated with white fur. Incessant vomiting had commenced three days previously, with a severe attack of hematemesis; she complained of pain and tenderness at a spot about one inch to the left of the xiphoid cartilage, and of pain shooting out under the left scapula. Milk, and a mixture prescribed to control the vomiting, were rejected almost immediately. On the following day, the vomiting continuing, nutrient enemata, a blister to the epigastrium, and iodoform (three grains in pill), three times daily, were prescribed. On January 23d the vomiting had ceased; the pain and tenderness had diminished; the tongue was still loaded. On January 26th the improvement still continued. On February 3d she felt quite well, and could take milk, jelly, etc. Nutrient enemata were now discontinued. On February 15th, it was noted that there had been no return of the vomiting since January 23d, and that meat, etc., could be used without causing the least inconvenience. A mixture containing iron was ordered. On February 25th she was discharged from hospital. She then stated that she had not felt so well for the last two years.

CASE OF SPINA BIFIDA CURED BY INJECTION OF IODINE.—At a meeting of the Clinical Society, Mr. A. Pearce Gould read notes of this case. (British Medical Journal.)

R. C. W., male, aged six months, was brought to Westminster Hospital on January 16, 1882. A tumor was situated over the lumbar vertebræ, about the size and shape of a large tomato; the tumor was translucent, fluctuating, sessile, covered with healthy skin; the child was otherwise well, and had no paralysis or deformity. The tumor became tense when the child cried; and pressure on it caused fullness of the anterior fontanelle. Mr. Gould drew off about ℥j. of the contained fluid, and injected ʒj. of Morton's iodo-glycerin solution. As no effect was produced, the operation was repeated a week latter, when ʒss. of the same solution was injected. After this the tumor became solid and shrank. The child was shown at a previous meeting, when the tumor was seen as a thick fold of skin over the lumbar spines. The chief interest in the case lay in the fact that the fluid removed was analyzed by Dr. Duprè and found not to contain even a trace of

sugar, showing that it was arachnoid, and not cerebro-spinal fluid; and Mr. Gould pointed out that this form of spina bifida was the most favorable for medical treatment. By experiments Mr. Gould found the iodo-glycerin solution did not readily mix with the fluid, but when poured into it, it sank to the bottom, thus confirming Dr. Morton's theory.

Mr. Parker said he had operated successfully on a similar case five years ago; the child now had a tendency to hydrocephalus and talipes; nevertheless, successful cases were very few and far between. In another case that day, the fluid drawn off had contained no sugar, and became nearly solid on being boiled. The injection had no immediate effect on the child. In a case in which the sac was cut across, because of commencing inflammation around it from pressure, the child had recovered. This bold treatment, if accompanied by the adoption of all antiseptic precautions and subsequent pressure, might possibly avert the spread of inflammation to the spinal cord.

The President thought Mr. Goodlee's case a favorable one for the operation, and the treatment by Morton's fluid seemed to be the best at present in vogue. He had at one time attempted the gradual treatment of spina bifida by slow drainage, under antiseptic precautions; but his first case was disastrous in its results, due to the free flow of cerebro-spinal fluid. In the next case he arranged for a still slower drainage, but the child also sank. This treatment, he was convinced, should be abandoned; nor did he think the laying open of the sac would be generally likely to succeed.

Mr. Gould had tried the treatment by Morton's solution in two other cases. He had altogether lost sight of the first case. In the second case, complicated with hydrocephalus, the child sank, and on the day after the operation was profusely salivated by the absorption of the iodine. In another case, under his colleague, Mr. Macnamara, the tumor of the spina bifida had been injected three times, and the child was now recovering.

The President believed that Dr. Morton now thought it advisable not to draw off the fluid from the spina bifida, but merely to inject the fluid, that being quite sufficient for the treatment of the case.

Aphorisms in Ophthalmology.—At the annual meeting of the Medico-Chirurgical Society of Maryland, Dr. J. J. Chisolm treated of eserine, which has taken the place of all other remedies in corneal affections; pilocarpin, which had produced the best results in the author's hands, internally used, of all the

articles in the pharmacopeia in acute inflammations of the eye-ball; salicylate of sodium of the greatest value in iritic and scleral inflammations, whether specific or rheumatic; homatropin to be preferred to atropia and duboisia on account of its transient mydriatic effect.

He also laid down the following aphorisms for general practitioners practicing ophthalmology:

1. Do not blister.
2. Do not use nitrate of silver.
3. Do not use acetate of lead.
4. Treat affections of the mucous surface by weak astringents—borax, sulph. zinc, tannin—and cleanliness.
5. Use weak solutions of eserine for corneal affections.
6. Atropia solutions are essential to break up recent iritic adhesions.
7. When in doubt, consult early with a specialist.

Diagnostic and Operative Difficulties in Ovariotomy.—Prof. Englemann, of St. Louis, in a paper with the above title to the April number of the American Journal of the Medical Sciences emphasizes the following points as of practical importance in securing successful results:

1. Enter the peritoneum at the upper angle of the abdominal incision, mindful of the safety of an enlarged bladder.
2. Endeavor to secure deep and firm union of the abdominal incision by carefully and closely-placed sutures during the operation, and proper support for months after.
3. Ligate all bleeding points, use the finest braided silk, cut short, and drop at once.
4. Avoid routine Listerism, and especially the carbolic-acid spray over the hands of the operator and into the abdominal cavity. Cleanliness, not carbolic acid, is necessary. Keep sponges clean and warm, but not carbolized; avoid carbolic acid about the peritoneum and open surfaces. Ligatures, sutures, and instruments should be clean, but not carbolized.
5. Late operations are the scourge of surgeon and patient. If an operation is indicated, operate early, as the patient's chances decrease with the growth of the tumor and the failing of health.

Notes and Queries.

PHILADELPHIA, June 2, 1882.

My Dear Parvin:

The American Surgical Association has just closed its third annual session. Its proceedings were dignified, harmonious, and profitable. I have gathered from one source and another an abstract of the work done, and in the August number of the journal will give in full two of the several valuable papers read, which will furnish much food for thought, if they do not also lead to new departures in the use of the trephine for skull-injuries and in tracheotomy for foreign bodies in the air-passages. The Association convened May 31st, and was welcomed by its distinguished President in his hearty, hospitable way. I make room for but a single paragraph. Prof. Cabell read the opening paper, On Sanitary Conditions in Relation to the Treatment of Surgical Operations and Injuries, and whatever may have been the opinions of the Fellows as to the correctness of its conclusions, no one who heard the essay could fail to acknowledge the scholarship and true scientific spirit of its conscientious and learned author. I hope the paper will find wide circulation, for its perusal can not fail to be profitable to all whose business it is to treat disease.

The following extract is from the Address of Welcome:

> We hope to make the American Surgical Association an altar upon which we may annually lay our contributions to Surgical Science, and so show to the world that we are earnest and zealous laborers in the interest of human progress and human suffering. We live in a fast age. Our heritage has come to us in pleasant places and under a propitious sky. Progress stares us every where in the face. The surgical profession was never so busy as it is at the present moment; never so fruitful in great and beneficent results, or in bold and daring

exploits. Many of the best minds in this and other countries are at work in perfecting our knowledge and placing it upon an immutable basis. Theory has given way to fact, and nothing that can not withstand this test is worthy of acceptance. The whole field of surgery, from the structure of a boil upon a man's face to an amputation of the hip-joint, is undergoing revision. Operative surgery challenges the respect and admiration of the world, and, if it has not attained its finality, it is as nearly perfect as we can hope to make it. Therapeutical surgery, too, is making rapid strides; and surgical pathology was never more zealously or more successfully cultivated. New avenues are constantly being opened, and the importance of the study of physiology, in its relations to practical surgery, is daily becoming more and more apparent. In short, in whatever direction we cast our eyes nothing but the most substantial encouragement greets our vision and urges us on to increased exertion.

The following were the conclusions presented by Dr. Cabell:

Septic complications have heretofore been the most fruitful causes of mortality after operations in hospitals, where their malignant effects are observed after secondary as well as after primary amputations.

Much may be done to prevent the development of septic poison by careful and untiring attention to sanitary precautions, including all the details of personal and hospital hygiene.

After securing all that can be accomplished by patient and scrupulous attention to sanitary arrangements, with a view to render the atmosphere of a hospital comparatively aseptic, there is good reason to believe that an additional protection of great value may be derived from the use of antiseptic precautions practiced in conformity with the Listerian principle.

"Listerism," practiced *de rigueur*, while not so essential in cases of amputation, where it may often be superseded by drainage and perfect cleanliness, has achieved results in operations on joints and in treatment of "abscesses by congestion" which have not been paralleled by any other system of treatment.

The preponderance of evidence is in favor of its utility in ovariotomy and abdominal sections generally, although marvelously good results have been obtained without special antiseptics, by a careful attention to other sanitary arrangements.

In the discussion which followed, the main topics of the paper were passed by, and the attention of the Association was limited

to the opinion expressed in regard to the antiseptic method of Lister.

Dr. D. W. Yandell, of Louisville, Ky., said that since the Congress alluded to by his learned friend, he believed Mr. Keith had added, perhaps, forty other cases—all successful—to the list done without Listerism. Among them have been some very heavy cases, and a few of them the "heaviest" possible cases. Keith had abandoned Listerism altogether in ovariotomy for reasons already known to the Fellows, but he still resorts to it in much of the general surgery he does, not having lost faith in it in this class of cases. The three things Keith insists on as essential are care, cleanliness, and complete drainage, and these in abdominal sections, at least, make antiseptics unnecessary. Lawson Tait has never used antiseptics—has, in fact, uniformly denied their usefulness. And yet he presents an array of cases of abdominal section done without antiseptics in any shape or form, which is not only very large, but in which the percentage of recoveries has never been exceeded by any follower of Mr. Lister.

Dr. Beverly R. Cole, of California, said that Mr. Lister himself had never considered the method suited to ovariotomy, and had tried to dissuade Keith from employing it. It was anticipated that Listerism would prove of great assistance to ovariotomy—"But *has* it?" Bantock, Humphrey, and many others are unequivocally opposed to it. Of fifteen who debated this subject in the International Medical Congress, only two—Thornton and Spencer Wells—expressed themselves positively in support of it. Even Sims, who had formerly believed in it, was no longer its devoted supporter.

Dr. Henry F. Campbell, of Augusta, Ga., said that perhaps because he was such an old man he could not take up with the method of Lister. He had got along so well without it for forty years that he could not adopt it now. Then he did not believe in the theory. Why, how could you apply it to lithotomy? Here is a case in which you cut into the bladder, take out a stone, put your patient in bed, and let the wound alone. How do the micrococci affect this? After having done this operation sixty or seventy times, he could say that he had never had a metastatic abscess nor any traumatic fever.

Dr. J. W. S. Gouley, of New York, said that he had always been *anti*-Lister. He never treated any wound by Listerism. Lister attacks the micrococci locally, but his plan does not get at those in the blood and lymphatic channels. We are all antiseptists, but not Listerists. For more than twenty years he had treated wounds with dilute alcohol. We all give quinia. What is that but a parasiticide?

So is the tincture of the chloride of iron. Another thing: statistics are not reliable. I know a gentleman who reports hospital cases as successful when they are not successful at all. As to Listerism, my belief is that it will soon be dead—that it is now dead!

Dr. R. A. Kinloch, of Charleston, S. C., said he was surprised at a misunderstanding in regard to Lister's method, which had been several times repeated in the discussion. He had been spoken of as one who closed wounds, whereas drainage is an indispensable part of his method. In his method the spray seemed to be all that was objected to. That Mr. Lister himself considered the least important part of his method. And yet, supposing Mr. Lister thought it indispensable, his opponents say it does no good; does it do any harm? Are the results of surgical operations worse than before its adoption? He did not believe that Listerism was dead, but that it is alive, and will continue to accomplish great good in surgery and reflect honor upon its originator.

Dr. Gay, of Boston, said he had had ten years' experience in a hospital in Boston in which from sixteen hundred to seventeen hundred in-patients are treated every year. Outside of large hospitals he did not think the Lister method can ever become very popular. It has been objected that it is too much trouble, but he thinks that this is a mistake, for all the extra trouble caused by the first dressing is made up for by the infrequency of the subsequent dressings. After the use of this method for five years, and comparing it with others used in the same wards, he finds there is nothing which checks suppuration and bad odor so quickly. In major operations he finds less suppuration after its use than when it is omitted. In the treatment of large abscesses, such as psoas and iliac, nothing has ever yielded such good results. Listerism has proved itself completely, and only the every-day working surgeon can properly appreciate it. The advantage of it in ovariotomy is proved.

Dr. Yandell said the success of Listerism did not prove so much as the last speaker claimed, for there could be opposed to it equal success by other methods. Take, for example, the success of Mr. Tait, already referred to. It has been claimed that without Listerism we would have never been able to open joints as we now do. This proves nothing. Without Otis's extraordinary treatment of the urethra, we probably would not now have Bigelow's method of lithotrity. But that does n't prove the value of such a method as that of Otis.

It is not safe to reach conclusions on the mere word of authors; collected experience must decide. He himself had done his first five cases of ovariotomy without the spray and all got well; he did his

last eight without the spray and seven got well. Between these two series he had done as many as fourteen or fifteen *with* the spray, and a number of them died. They did not die because of the spray any more than the others got well because the spray was not used.

Another thing to be remembered is that ordinarily every operator's greatest successes have been in his last cases, and all his great disasters in his earliest. In deciding the value of this method we must still work and wait. And thus in time we shall come to find out whether Listerism is of great value in itself, or whether its apparent advantages are due to the cleanliness and care it makes necessary.

DR. E. M. MOORE, of Rochester, said that he would go further than Dr. Yandell with reference to the spray; he would say that he believed the cases of his that died under the spray died because of the spray. Some years ago he had thought that the solutions of carbolic acid used were too weak to do much good, and then the idea had come into his head that the spray might, instead of eliminating germs, collect them; that the general rush of the air might collect them. So he made an experiment. He played upon a clean sheet of plate glass with the spray and then examined it with a lens, and found that there was not a quarter of an inch of the surface on which there was not a mote collected from the atmosphere by the spray and deposited there. He said then he considered the spray a most ingenious apparatus for spoiling a peritoneum.

DR. COLE denied that Lister's method had led to the confidence in operating upon joints. He and Dr. Cooper, of California, had opened knee-joints freely twenty or more years ago.

DR. GOULEY had also opened knee and other joints without Listerism, and had no disagreeable reaction, no suppuration.

THE PRESIDENT, DR. GROSS, then announced the Committee on Nominations, as follows: Drs. Cabell, Mastin, Yandell, Davis, Norris.

TREATMENT OF FRACTURES OF THE SKULL, RECENT AND CHRONIC, WITH DEPRESSION.* By Dr. Moses Gunn, of Chicago, Illinois.

He called attention to the general sentiment of the profession, since the day of Abernethy and Cooper, against interference in cases of fracture unless symptoms of brain irritation or compression are urgent. In this, American and English surgeons were agreed. Gross

*This paper will appear in August No.

seemed to go the farthest in the direction of interference where there is depression, not postponing it as long as most authors advise. The question now arises, are we not too conservative in our treatment of simple fractures of the skull, with depression and without symptoms? He believed we should answer yes. He held that in all recent fractures with depression, whether simple or compound, even though entirely without symptoms of compression, if there is reason to believe that the internal table is depressed, even if there are no symptoms of marked concussion or collapse, elevation of the depression should be promptly effected. In fractures from external force, injury is apt to be more severe to the inner plate of the skull than to the outer; and even when this does not occur and constitute an immediate danger, there is the possibility of the formation of osteophytes, which will later be a source of danger. The danger of interference having been reduced nearly to zero by antiseptics, we are warranted in operating where formerly we would not have been.

Statistics of bad results after trephining, in order to show that this was the cause of them, should show that there was no previous irritation or inflammation. If the dura mater had not been injured already, it will not be by the trephine. No careful surgeon would do this. In chronic cases, *as soon as positive*, even though comparatively *slight* symptoms of cerebral irritation present themselves, a disk of the cranial walls, intended to include the irritating point, should be removed by trephine, and should include the whole depression, or at least the most depressed portion of it. Subsequent irritation is often due to the formation of osteophytes, and he believed that the cases successfully treated would be found to be those in which early interference has been made. All operations and dressings should be conducted upon strict antiseptic principles.

Dr. Levis said, it is a surgical axiom that the amount of depression should more influence the surgeon than the absence of symptoms. Shock usually masks the signs of compression. Most of the patients brought to Pennsylvania Hospital present symptoms of concussion, and if we waited for signs of compression before operating, we would often be too late. We usually trephine for depression, and are not governed by the symptoms of compression.

Dr. Moore asked the question, How are we to know when there is internal pressure, unless we have symptoms?

Dr. Gunn replied that when, in compound fracture, the external plate is broken and depressed, we can assume that the internal plate is more so. You say, "If, in a case of simple fracture, you believe

the internal table is depressed, we should elevate." Now, if I find fracture and depression in the outer plate, not over the position of a venous sinous, I believe it right to either elevate or trephine.

Dr. Moore thought the English too conservative on this subject, and a reaction was taking place. He did not think that the trephine ought to do harm to the dura mater; a careful surgeon will not let this happen. But the vessels of the diploë must be torn most fiercely. This is inseparable from the use of a saw. He prefers to elevate and carefully pick out fragments.

Dr. Hunter McGuire, of Richmond, said that the statistics of this operation are better for American than for English surgery. This is partly due to the fact that the former include those of the Peninsular and Crimean wars when different missiles were used, and partly because American surgeons interfere more promptly. There are many cases where there may be some danger to life if an operation be done; but where, if it be neglected, the risks of subsequent brain injury are so great that it is a question whether the patient's life is worth saving. But to express an opinion in favor of operating in every simple depressed fracture of the skull would be to give a license to every young surgeon to use the trephine. If a fracture is simple, and the amount of depression not enough to bring on symptoms of compression, the surgeon had better let it alone, and trust to the brain accommodating itself to the change. He thought that for the Association to indorse such opinions as expressed in the paper just read by one of its most prominent Fellows would be most dangerous.

Dr. Gouley, of New York, said he had removed a small disk of bone from a man who had a punctured fracture of the skull, inflicted by the hammer of a gun. There were symptoms of compression. Under the point of fracture there was a clot. He believed that wherever there is reason to believe that the internal table is depressed, it is a good plan to remove a piece of bone. He also narrated a case from which he removed a disk of bone, finding under it seven or eight fragments pressing upon the dura mater. Two weeks later the bone, for nearly an inch around the position of the disk, was found hard and white, and in six weeks he removed a sequestrum. In another case he refrained from operating on a man who declined to be trephined. The man is alive today, but is insane, and has been since that time.

Dr. Briggs, of Nashville, Tenn., said he had never regretted the use of the trephine, but had often regretted that he had not used it. He thought it was the proper operation for the prevention of the secondary effects which often follow head injuries. Of these he had seen over one hundred cases, possibly, where no operation had been

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done. Among these were twenty-eight cases of epilepsy, and two of insanity. There are two classes of these injuries. In one there is a diffused, in the other a local injury of the brain. He did not believe the operation demanded if the fragments remained fixed and stationary. The brain will accommodate itself wonderfully to such a condition. He had seen recently a case in perfect health with a depression of the skull so large that he could turn an egg around in it.

He thought the trephine should not be used for depression alone, but where there are spiculæ, for these may set up immediate or later irritation. He had seen a boy with fracture of the parietal bone, without any evidence of depression; no operation. Soon after there came on curious spasmodic movements of the left hand, and more or less of the whole left side. He trephined and found a fissured fracture of the internal plate, the edge of which was turned directly in against the brain.

The operation of trephining he considered one of the safest of capital operations. Another case in which trephining is called for is where there has been bruising of diploic structure, without fracture of the inner table, in order to allow of the discharge of pus and other matters. As to after treatment, he would not close the wound, but just let the flap down, so as not to interfere with the discharges.

Dr. R. A. Kinloch, of Charleston, S. C., indorsed the old rule of moderate depression, without symptoms of compression. The fracture should be let alone. Any attempt to elevate only increases the risk. The presumption that the patient is going to suffer from after-effects is not justified by statistics. Sometimes, even after removing a piece of bone, the bad symptoms continue, showing that they were due to deeper injury. Exploratory incisions add to the risks of the patient. Where there is only depression of the external plate, it is in the best condition if let alone.

Dr. S. W. Gross said that he could fully indorse Dr. Gunn's conclusions as to chronic cases of fracture, but in regard to recent ones he preferred the following modification: That in all recent fractures with depression, if the latter be moderate, whether simple or compound, the patient should be left alone. If, however, fixed and severe pain at the point of injury, febrile excitement, increase of local temperature, and a commencing puffiness of the scalp supervene within a few days after the accident—signs which are indicative of depression of the internal table and the development of pachymeningitis—elevation of the depression should be promptly effected. In all recent fractures, whether simple or compound, attended with symptoms of compression, the trephine should be resorted to; and the same rule

should apply, whether symptoms be present or not, if the depression be considerable and funnel-shaped.

Dr. Yandell said he would subscribe to all Dr. Gross had said if he would but add that in simple fractures an operation should only be undertaken if the symptoms of compression *persist.* We all know how fleeting these symptoms sometimes are. The old rule is not a bad one, and probably can not be improved upon.

Dr. Gunn said his opinions in regard to compound and punctured fractures did not differ from those ordinarily entertained. In regard to simple fractures he had taken but a step in advance of the principles laid down by the distinguished President of the Association.

Treatment of the Transverse Fracture of the Patella, with the object of producing Bony Union. By Dr. R. J. Levis, of Philadelphia.

Dr. Levis called attention to the fact that, the patella not being a symmetrical bone, it was hard to make any well-fitting appliance to it.

Having no natural depressions to which to apply force, the application of such force creates unnatural depressions. Thus pressure upon the angular edges above and below tends to draw the fragment upward, and, even if it could bring the lower edges of the fracture together, it would separate the upper edges. The result of ligamentous union is apt to be lameness, inability to use, and mistrust of, the injured leg. Bony union is very rare. It has been doubted if it ever occurs. With the ordinary apparatus he did not believe it could be secured. But he and Dr. Morton had for some years been using a modification of Malgaigne's hooks, with which he believed he had secured it. His own modification consisted in separating the hooks, so that they can be inserted on the two sides of the fragment. He showed two patients treated in this way, in whom no motion could be detected between the former fragments, and who had complete use of and confidence in their legs.

Dr. Thomas G. Morton, of Philadelphia, said that in 1873, after having always used the usual methods with unsatisfactory results, he tried Malgaigne's hooks, and to his pleasure he got what he believed to be bony union. Since then he had used the same and some modifications of them in a number of cases. He showed a pair so constructed that the upper or lower hooks could be made to approach or recede from each other. He never put the hooks on before the fourth day. He first applied lead-water and laudanum, elevated the limb, perhaps used gentle compression, until the effusion and swelling were

reduced, and then etherized the patient and put in the hooks, applying a splint for twenty-four hours, just to keep the patient still till he got a little used to the hooks. He has seen no good from keeping the hooks in over sixteen or eighteen days. He has never seen trouble follow their use. Of course this method was not applicable to all cases of fracture of the patella. In comminuted fractures, for example, it could not be used. Again, if approximation can be secured by slight pressure of the fingers, there is no need to use the hooks; but when the separation of the fragment is wide, say an inch and a half to two inches, then they may be used with advantage.

Dr. W. A. Byrd, of Quincy, Ill., thought milder means would do as well. He treated a fractured patella with Martin's rubber bandage, placed over a posterior splint in the manner of a figure 8. He did not aspirate the joint, and the man got bony union. If you pad the splint well, so as not to irritate the flexor muscles, you will get a good result.

Dr. Levis reverted again to the fact that there are no real points or ridges on the patella to which to apply pressure, and they must be obtained at the expense of the normal relation of the parts and by pressure upon the soft structures, and thereby putting the muscles inserted in the petella upon a strain. As to danger, it is impossible to penetrate the joint with these hooks. The trouble is to get them well into the bone. He does not apply them as soon as Dr. Morton. He waits for ten days, when the effusion has subsided. Anesthetics are not needed on account of the pain of inserting the hooks; but they lessen the spasm of the muscles and permit better approximation of the fragments. When separation of fragments is great, there must almost always be a rupture of the bursa patella. He uses no other dressing than a little charpie or oakum around the hooks. The body may be raised a little, so as to relax the rectus muscle. He gets bony union, or what is just as good. If the cases shown are not examples of bony union, it is at least impossible to detect any separation between the original fragments.

Lengthening of the Femur after Section. By Dr. E. M. Moore.

Dr. Moore showed a specimen of the pelvis and thighs of a case in which he had operated for the correction of deformity, two years after dislocation of the head of the femur on the dorsum of the ilium. He did subcutaneous osteotomy, dividing the neck of the femur; after which he extended the thigh by weights. The bone

united, with a gain of an inch and a half in length. Much new bone material was thrown out. The patient died some time after recovery, and he secured the specimen exhibited. This showed the head of the bone to be surrounded with an open coral-like mass of osteophytes and the shaft united to the neck by the interposition of an inch and a half of new bone. This, he said was very interesting, in view of the modern theory that no bone will form except under periosteum; for here there could not have been any. It is impossible to conceive of the periosteum stretching across a gap of an inch and a half.

Dr. Mears, of Philadelphia, said he once did an osteotomy for pain in consequence of old luxation of the humerus. The patient was relieved from pain, but died a year subsequently, when he made a post-mortem and found no false joint, but bony union. The result of the two cases tends to show the difficulty of obtaining false joints.

Dr. Moore narrated the case of a boy upon whom he had divided the neck of the femur, whose physician put him on a tricycle to keep up motion; and so far from effecting this, the bone reunited firmly, and the advantage of good position, which the operation had secured, was lost.

Foreign Bodies in the Air-passages. By J. R. Weist, of Richmond, Indiana. This article will appear in the August number of this journal.

The Antiseptic Treatment of Wounds after Operations and Injuries. By Dr. W. T. Briggs, of Nashville.

After a review of the germ theory and coming to the conclusion that this is not established, the author laid stress upon the distinction between antiseptic surgery and Listerism. All good surgery is antiseptic. He wished it could also be said that all antiseptic surgery is good. The antiseptic treatment of wounds after operations and injuries is not limited to Listerism or any special method, but is based upon broad, general principles. Antiseptic surgery embraces every condition or agent that tends to prevent putrefactive changes in wounds, or to remove or neutralize the evil effects of such changes when they have occurred. Properly considered, it consists, first, of such means as will restrain inflammatory action within reparative bounds; and, second, of such means as will subdue excessive action, and remove or neutralize the effects of destructive inflammation. How may a surgeon confine the act of healing to an active reparative effort? To do this always is impossible; but certain precautions

are of value. No patient should undergo a capital operation without a careful preparatory treatment. Every weak part of the system should be supported. If this can not be secured, the greatest care must be taken after the operation. Arrange that the wound should have all foreign bodies kept away from it. Cleanliness is not simply the removal of dirt, but of every thing that can be injurious. Drainage and proper coaptation are of the utmost importance. Rest and control of circulation should be secured by well-regulated compression. Moderate and uniform temperature should be maintained.

When excessive inflammation occurs, all efforts must be made to restrain it. Methods which regulate healthy action serve to correct excessive action. One method will not do for all cases. The treatment of fresh wounds, for instance, is not suited to those which are old and putrefying. If such wounds are closed, thorough drainage must be made.

Dr. E. M. Moore said he is now making a series of experiments in regard to antiseptic surgery. All know the better results of subcutaneous surgery. Now the thing to be secured is to make such modifications as shall give to external surgery the advantages of internal, and this is what Mr. Lister also aims to do. He has performed ovariotomy four times in the following way. (He lost two of his patients, but not by peritonitis.) He passes carbonic acid gas into the place where the operation is performed, and merely preoccupies the place of the air with the carbonic acid. Thus, instead of attempting to purify the air, he preoccupied its place with carbonic acid gas. He claimed that whenever a profuse hemorrhage cleans a wound out, and a discharge of serum soaks the dressing placed over it and then dries, we have a simple but complete form of natural antiseptic dressing.

Dr. H. F. Campbell said that his invariable practice in all grave surgical cases was to administer quinine to cinchonism and maintain this for some time. To this plan he attributes the fact that he has little suppuration, and very rarely such a thing as a metastatic abscess. He does not believe that germs provoke inflammation, and that the good of carbolic acid depends upon the fact that it kills them, but that inflammation and suppuration are due to reflex irritation, and that for this reason opiates often prevent inflammation, and that carbolic acid does good because it obtunds the peripheral sensibility.

The Museum and Library of the Surgeon-general's Office.

Dr. D. W. Yandell offered the following resolutions, which were adopted:

WHEREAS, The American Surgical Association, in its annual session at Philadelphia, on June 2, has learned with deep regret that the Senate Committee on Appropriations has reduced the annual appropriation for the Museum and Library of the Surgeon-general's Office from $10,000, as passed by the House of Representatives, to $5,000; therefore,

Resolved, That the President and Secretary are hereby instructed to communicate to the United States Senate the opinion of this body that such reduction would be extremely unwise, by hampering the growth of the museum and library, in which the people of the whole civilized world are deeply interested, because through these collections the knowledge of the science and art of medicine and its application to the relief and cure of disease and injury are being vastly increased and diffused for the benefit of all mankind; and that now to cripple this work which the Government has in its power to develop, by a reduction of appropriation, would be to retard the unfolding of resources to successfully combat disease and injury, and to impair the growth of an institution regarded as an enduring monument of the philanthropic liberality of the American nation.

Resolved, That these collections, which are unrivaled in their richness and usefulness, are a source of just national pride, and as they are a benefit beyond price to the whole people—for all men are subject to disease and injury—they are especially worthy of the fostering and liberal care of a Government of the people.

The Nominating Committee now made its report through its Chairman, PROF. CABELL.

At its conclusion, DR. GROSS, who had been nominated for a third term in office, arose, and amid profound silence, and in a voice tremulous with emotion, said:

"Before this report be acted upon by the Association, I desire to offer a few remarks respecting my nomination for the office of President. While I am fully sensible of the high honor which the Committee have intended to confer upon me, I hope and trust that they may be induced to reconsider the matter and select some other Fellow for the position. I claim no preëmption right to this office, and I have certainly occupied it long enough. The object of my highest ambition, as it respects this Association, has been accomplished. Its success is fully assured, and I retire from the chair, which I have occupied during the last two years, with feelings of no ordinary emotion. We have done a noble work, a work which far exceeds my most sanguine

expectations, and which, if I do not greatly err, is destined to pass into history.

"The establishment of an Association which should bear a national name, and embody in one harmonious whole the surgical talent, experience, and wisdom of this great country, had long been one of the cherished objects of my ambition. No opportunity, however, of a favorable nature for carrying my design into effect occurred until the meeting of the American Medical Association, at Atlanta, in May, 1879. Calling around me three distinguished friends, Profs. Gunn, Briggs, and Dawson, all widely known as great surgeons, I disclosed to them my scheme, and succeeded at once in enlisting their hearty sympathy and support. The following day the meeting was organized by the appointment of the eminent and venerable Prof. Dugas, of Augusta, as Chairman, and Prof. Dawson, of Cincinnati, as Secretary. Brief addresses were made by different gentlemen, all cordially approving of the objects of the meeting, but for reasons which need not now be mentioned, nothing further was done on that occasion. Before, however, parting with my immediate associates, it was determined that we should send a circular to the principal surgeons of the United States, setting forth our plans, and inviting their coöperation at a conference to be held at New York during the sitting of the American Medical Association in June, 1880. At this meeting Professor Sayre, on my motion, was placed in the chair, and nearly fifty gentlemen registered their names, a temporary organization being effected by the adoption of a constitution and the election of officers. I had the honor to be put at the head of the list. Professor Dugas was elected First Vice-president, and the late lamented Professor James R. Wood, Second Vice-president. The next meeting, one also wholly of an executive nature, took place at Richmond, Virginia, May, 1881. The next was held at Coney Island the following September. Although this meeting was slimly attended, it performed useful work, and laid the foundation of the present meeting, which has eventuated in such a triumphant success.

"Thus, Mr. Chairman, it will be perceived that what promises to become, if it not already is, a great and useful, and, we hope, an enduring Society, had, like all similar enterprises, a small and humble beginning, with not a few early struggles and trials. Before I resume my seat, let me again entreat the Association to withdraw my name from the list of officers."

When Dr. Gross sat down, Dr. D. W. Yandell, addressing the Chair, spoke as follows:

"What is writ is writ, what is done is done. When the Nominating Committee, of which I was a member, and for which I rise to speak, met, it instinctively, on the instant, and unanimously, chose the venerable surgeon who has just spoken for the highest office, the first place in the gift of the Association. The Committee, sir, selected him as his own successor, and in doing so we felt that our action did not express the wishes of this body alone, but expressed the sentiment of every true man in the profession in America. Had the Constitution of the Association conferred upon us the power, we would have put on him the royal purple, and, hailing him chief among all, have bid him wear it for life; for, having won the scepter, we wished that the hand which had plucked such enduring renown for home surgery should continue to wield it—a hand, the skill of which an age bordering on four score years has not yet impaired, and the frank and cordial pressure of which no man ever felt without feeling the better for it.

"As the founder of this Association, he opened up possibilities for surgery for which we wished to thank him.

"As the father of modern American surgery, we wished, as dutiful children, to convey to him in our report some idea of the respect and reverence we felt for him personally, no less than our appreciation of his labors in the science which he has done so much to create, to enlarge, to illustrate and adorn, and of which today he is so complete an embodiment. And in what we did, Mr. Chairman, we felt that we were uttering the sentiment not of the profession of this country alone, but that in tendering him fresh honors, the action would be approved by workers in surgery throughout all the world.

"Sir, the deeds of this our Fellow, whose name is now again offered you for the presidency, are great deeds, and "great deeds can not die. They, like the sun and moon, renew their light forever." And we have all been blessed by looking on those of him whose term of office having just expired, we now propose again to renew.

"We are fully aware that, did Dr. Gross consult his own wishes, he would, on laying down the cares of office, not willingly resume them. But he must, in this case, yield his wishes to ours; for the united desire of the profession to which he has given his undivided life possesses, let us believe, the force of a command. Ordinarily, fathers direct their children. Here the children, through love, command the father. In this spirit, then, the Committee can not allow Dr. Gross to decline the office which they have laid at his feet. And in a career of unsurpassed usefulness and of unequaled splendor, crowned both at home and abroad by every possible honor, the Asso-

ciation would fain believe that this, though the most recent, tribute to his worth shall not be esteemed by him to be the least.

"In conclusion, the Committee, acting for the Association, and speaking for the profession at large in the United States, not only declines to withdraw the name of our beloved founder, but begs here to declare that he is unanimously again chosen President of the American Surgical Association."

The following officers were then elected to serve for the ensuing year: *President*, Prof. S. D. Gross, of Philadelphia; *Vice-presidents*, Dr. E. M. Moore, of Rochester, N. Y., and Prof. Moses Gunn, of Chicago; *Secretary*, Dr. J. R. Weist, of Richmond, Ind.; *Treasurer*, Dr. John H. Packard, of Philadelphia; *Recorder*, Dr. J. Ewing Mears, of Philadelphia; *Council*, Dr. R. Beverly Cole, of San Francisco, to serve for one year; Dr. George W. Gay, of Boston, for two years; Dr. H. F. Campbell, of Augusta, Ga., for three years; and Dr. Hunter McGuire, of Richmond, Va., for four years.

REMOVAL OF BREAST FOR CANCER. By Dr. S. W. Gross.

DR. GROSS exhibited four patients from whom he had removed the mammary gland for carcinoma. His object in bringing the cases before the Association was to demonstrate the condition of the cicatrices at various periods of the operation; as it had been theoretically urged at a former meeting that the thorough operations practiced by him might be followed by morbid conditions of the cicatrical tissue.

CASE I. Here the cicatrice is soft, mobile, of a natural tint, and hardly an inch in width. The entire breast, with its coverings, the pectoral fascia, and a mass of axillary glands were removed September, 1878, when the woman was forty-eight years old. Forty-five months after the operation there is no evidence of recurrence.

CASE II. Thirty-four months ago, extirpated the entire breast of a woman thirty-nine years of age. The axillary glands were free from involvement. The wound closed in thirteen weeks. The cicatrice, which is at its widest part nearly three inches broad, is soft, mobile, and free from discoloration. The disease has not recurred.

CASE III. Removed the entire breast and ten axillary glands from a married woman forty years of age, December, 1881. The edges of the wound united, but subsequently reopened; and the cicatrice,

which is still red, is only half an inch wide. There has been no recurrence of the disease.

CASE IV. Removed the entire breast of a lady forty-five years old, March, 1882. The axillary glands were not affected. The cicatrice is scarcely an inch wide; but, in consequence of too early and too frequent use of the corresponding arm it became the seat of several superficial excoriations. The patient is free from recurrence.

HIP-JOINT DISEASE. By Dr. J. C. Hutchison, of Brooklyn.

He laid great stress on the importance of rigidity as an early symptom. He then recommended his method of taking off pressure from the joint by means of the weight of the limb itself, kept clear of the ground by a high-soled shoe on the sound side and crutches. As a substitute for the high shoe, Dr. Levis suggested flexing the leg of the diseased side at a right angle, so that the other foot could act more naturally. Dr. H. thought he had somewhat improved upon this by bending the leg to an angle of 45°, and keeping it in that position by a splint made of cardboard molded so as almost to encompass the thigh and leg, and strengthened at the back with a flat steel bar. This method he advised for all stages of hip-joint disease, except when the patient was too weak to be out of bed. Such he would treat with rest in bed, with extension by a weight and pulley.

DR. BASIL NORRIS, U. S. Army, inquired whether Dr. Hutchison recommended the splint applied to the back and thigh.

DR. HUTCHISON: You mean Mr. Owen Thomas's splint? No; I only use the high shoe and crutches, or the splint I have just shown and crutches.

DR. DE FOREST WILLARD urged the importance of early diagnosis. Cases that go on until any one can recognize them are very hard to cure. But he has seen many cases recognized very early and the best results obtained. Early rigidity is pathognomonic of hip-joint disease, and wherever seen must be treated as if hip-joint disease. Then it can be cured. He advocated a fixed dressing—starch, silicate of soda, plaster—any thing to fix the joint.

DR. KINLOCH doubted theoretically the advisability of flexing the leg, because then the femur would be in danger of sudden rotation by blows upon the leg.

DR. LEVIS said he did not insist on flexing the leg to a right angle. A flexure which prevented its touching the ground in walking would suffice.

DR. HUTCHISON said he had not found Dr. Willard's suggestion of

a firm dressing necessary, and he did not use it, first, because it did not hold the joint immovable—he had never seen an apparatus which could; second, nature does this herself. The trouble is not to fix the joint; nature does this better than art can. By his method he has not found it necessary to use extension at night. Owen Thomas's splint is a very good splint in many ways. There is none that fixes the joint better, but one while wearing it can not sit down. He must either stand or lie. He can not defecate in the natural position without removing it, and its inconveniences outweigh, in his mind, its usefulness.

RADICAL CURE OF TRAUMATIC INFLAMMATION BY ANTIPHLOGISTIC ARTERIAL LIGATION. By Dr. H. F. Campbell, of Georgia.

He made the point that tying the main artery of a limb in which there is destructive inflammation will check the inflammation by controlling the circulation and reducing it nearer to a healthy standard, and that in this way a limb in which commencing gangrene is present may be made to take on healthy action and be saved. Ligation differed from the tourniquet or digital compression, because it left the venous system open for drainage. He stated that he had ligated the femoral artery at the apex of Scarpa's triangle in a limb already gangrenous. The second day the swelling was much reduced; the third day the sanious discharge was replaced by laudable pus, granulations formed, and the limb was saved. This case was but a type of some fifteen, of upper and lower extremities, which he had saved in this way.

He held that no hand, no forearm, no arm, no foot, no ankle, no leg, should ever be amputated for gangrene or traumatic inflammation without first considering the propriety of making an experimental ligation of the artery supplying the limb, *unless* there should be such disorganization as to make it impossible to save it.

DR. GUNN: "To cut off the only supply of the limb?"

DR. CAMPBELL: "I thank you for that question. My theory is that when a limb is swollen and turgid with blood and gangrene is threatening, it is not from too little, but from too much blood. Cut off all but the collateral circulation and you correct the turgescence. We are instructed in this matter by the phenomena of aneurism. When we tie a main artery for a gunshot wound, we may have gangrene, because the system is unprepared; the cut-off is too sudden. But in aneurism the general conditions of the part prepare the patient for the operation. So in commencing or threatening gangrene, we have every blood-vessel swollen and dilated, and when the main artery

is ligated, this cuts off only the excess of blood, leaving enough to go through the collateral circulation to nourish the limb. The effect is at once to relieve tension and put the whole in better condition.

DR. BONTECOU, Troy, N. Y.: "Would not incisions down through the deep fascia accomplish the same result?"

DR. CAMPBELL: "As far as tension alone goes, it might. The relief of tension is not the main point of my theory, but the relief of engorgement. The tension in such cases is different from ordinary tension. Not only is a muscle or other tissue tense, but every fibril, every cell, every atom, so to speak, is swollen, and no way of relieving this is so effectual as to cut off the arterial supply."

INTRACAPSULAR FRACTURE OF THE NECK OF THE FEMUR, WITH BONY UNION. The Secretary, Dr. Weist, read for Dr. Senn, of Milwaukee, an account, and showed a specimen, of a case which he called "Intracapsular Fracture of the Neck of the Femur, with Bony Union."

The patient, seventy-five years old, fell upon her left trochanter, and sustained what Dr. Senn diagnosticated as an impacted fracture of the neck of the bone. He placed her on her back, and applied sand bags. She went on crutches at the end of three months, and walked without crutches or pain at the end of a year. There was one inch shortening. Motion in joint limited. When she died, about a year after the injury, he obtained a post mortem, and secured the specimen submitted, in which the line of union could be traced, and the fact established that it was union after an intracapsular fracture.

DR. GUNN said that bony union after intracapsular fractures is so rare that each claimant challenges the closest scrutiny. After carefully examining the specimen presented, he could see no evidence of impaction, and he was satisfied that a part of the inner fragment was outside of the capsular ligament, and therefore had received other nourishment than that obtainable through the ligamentum teres. To an inquiry of the President, he replied that he had never seen a case of bony union after an intracapsular fracture of the neck of the femur, and never expected to.

THE PRESIDENT said he had never seen one and never expected to.

INTRAPERITONEAL METHOD OF TREATING THE PEDICLE IN OVARIOTOMY. Dr. J. Ewing Mears read an account of some experiments he had made with Dr. Morris Longstreth, on this subject.

He stated that he and Dr. Longstreth had removed the ovaries of rabbits, using ligatures of various kinds, and returning the pedicle into the abdominal cavity. The results seemed to show that catgut ligatures applied only tight enough to control the vessels stayed in place, became encapsulated, and were after a while absorbed, without giving rise to any evidence of peritonitis. Silk ligatures resisted the disintegrating action of the tissues longer than catgut.

The next meeting will be held in Cincinnati, in May, 1883.

Faithfully yours, D. W. Y.

Crab Orchard Springs.—The dog-star comes apace, and seekers of pleasure and seekers of health are casting their plans to exchange for a season the hum-drum of home for the excitements of travel and the benefits which follow "a course of waters." To both these classes we beg to commend Crab Orchard Springs. To sufferers from digestive derangements, torpid livers, constipation, and that entire class of ailments, the waters of these springs offer almost unfailing relief. The location is elevated, the surroundings charming, the air fresh and invigorating, the hotel newly equipped with every convenience; and under the management of that hearty, hospitable, and generous host Gen'l Robertson, formerly of the celebrated hostelrie the ancient Phenix, at Lexington, every thing will be provided for the comfort and happiness of hypochondriacs, valetudinarians, and the sick; while the well will find nothing omitted which can in any way further their enjoyment.

Specially for Specialists.—Dr. Theobald, of Baltimore, himself an eye and ear surgeon, but clearly not a specialist, says in the Medical News, "There is a tendency upon the part of all specialists—whether medical or not—to become to highly specialized. In the specialist who devotes himself to the study and treatment of diseases of the ear, the otologist, this tendency is manifested most conspicuously in a disposition to overestimate the value of purely local measures, and to underestimate the value of constitutional measures, in the treatment of maladies with which he has to contend."

THE SAME TO THE SAME.—The practice of medicine, like the art of war, is, in a greater or less degree, a succession of mistakes—the best generals and practitioners being those who make the fewest mistakes; and the surest way to avoid error, whether in war or in medicine, or in any other art, is by a diligent endeavor to base every scientific or theoretical opinion and every practical doctrine upon the widest and most exact observation of all the facts which have relation to the subject in hand.

The unscientific absurdity and the practical evils of a narrow and exclusive specialism, can scarcely be better shown than by the study of the various forms of renal degeneration, whose influence upon the general system is so wide and far reaching that during their progress almost every tissue and organ and function of the body may suffer more or less perversion and derangement; and so typical and characteristic are some of these secondary results of renal disease, that, in one case, the ophthalmoscope; in another, the finger on the full and tense radial artery; and in another, the hand or the stethoscope over the strongly heaving hypertrophied heart, has alone sufficed for the diagnosis of advanced degeneration of the kidney. (Dr. George Johnson, of London.)

NOTICE TO GRADUATES OF BELLEVUE HOSPITAL MEDICAL COLLEGE.—A second decennial revision of the catalogue of alumni of this college is being prepared for publication, and we are requested to ask that all graduates send their present address at once, on a postal card, to the Historian of the Alumni Association, Bellevue Hosp. Med. Coll., New York, N. Y.

A CORRECTION.—By some inadvertence, an article on the *Removal of Benign Tumors of the Mamma, etc.*, by Dr. Thomas, which appeared in the June number of this journal among selections, was not credited to the *New York Medical Journal*, in which it originally appeared.